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Dry Spell Scare Little Threat To N. Y. Air Cooling

**Drastic Steps Unlikely;
Sale of Water-Savers
May Be Boosted**

NEW YORK CITY—Alarmed by the possibility of a water shortage which might possibly curtail use of air conditioning here, representatives of the industry and the Air Conditioning and Refrigeration Association of New York, Inc. together with engineers of the city water department are now completing a survey of air conditioning systems in the five boroughs of New York, to determine the amount of water necessary for operation.

Action by the air conditioning committee followed a recent disclosure by Joseph Goodman, commissioner of Water Supply, Gas, and Electricity, that some form of water rationing would be necessary by spring if no improvement was made in the city's upstate water reserve.

In a carefully worded statement, Mr. Goodman said, "Measures may have to be taken for more rigid control of the supply to the consumer. This will be the first time in 30 years that such steps will be taken."

Mr. Goodman thanked the public for cooperation in his drive against wasting water and said consumption had dropped 25,000,000 gallons a day, adding that about 200 members of the National Youth Administration would join in a house to house canvass to locate leaky water faucets and fixtures.

As the result of a current city-wide campaign against waste of water through leaky faucets and fixtures, a small boy in Brooklyn wrote Mayor LaGuardia expressing delight at the prospect of not having enough bath water for his semi-weekly ordeal in the tub. The Mayor stated publicly that plenty of water for washing necks and ears was still on hand and that all the small boys in town could still have a bath every day if their parents so advised.

One week's heavy rainfall might suffice to bring the supply back toward normal, but if the spring months are dry, city officials estimate that "more drastic measures might be necessary."

In seeking uses of water which might be cut, officials were impressed by the figure of thirty million gallons of water, which is said to be the peak consumed by air conditioning systems in the city on a humid August day.

Any action with regard to air conditioning would hinge on the amount of rainfall in the next few months; on the exact number of ordinary air conditioning systems and of those employing water towers or evaporative condensers; and on the nature of the buildings using air conditioning. Such statistics are being collected by the committee and will

(Concluded on Page 6, Column 4)

Bumby Succeeds Petrie At Barlow & Seelig

RIPON, Wis.—H. A. Bumby has been elected president of Barlow & Seelig Mfg. Co., manufacturer of Speed Queen washers and ironers, to succeed R. I. Petrie. Mr. Bumby has been associated with the company since 1927, and for several years was a director, treasurer, and vice president of the firm.

W. A. Royce was elected treasurer of the company to succeed Mr. Bumby, and will also act as comptroller. R. C. Labisky has been appointed assistant to the president. L. W. Ryder will continue as general sales manager of the company.

Hardware Men Hit 5-Year Guarantee

MILWAUKEE—Contending that the public is under the impression that the five-year guarantee offered in connection with the sale of electric refrigerators applies to the entire unit rather than to a limited part of it, the Wisconsin Retail Hardware Association, Inc., at its annual convention here Feb. 6-9, went on record against manufacturers issuing such a warranty and recommended that it be reduced to one year and no charge made in connection with such guarantee.

Copies of the resolution are to be forwarded to the National Refrigerator Dealers and National Refrigerator Manufacturers' associations.

The association also adopted a resolution criticizing manufacturers

(Concluded on Page 24, Column 4)

Wesco Men To Compete For \$10,000 In Awards

EAST PITTSBURGH, Pa.—A nation-wide, year-around contest for Westinghouse Electric Supply Co. salesmen, with "40 Plus" as its theme and with prizes totaling \$10,000 for salesmen meeting or exceeding quotas for 1940, was launched Jan. 26 by B. W. Clark, Wesco president, via a long-distance telephone hook-up extending from Boston to Los Angeles.

Said to be the first sustained all-year sales drive ever instituted by an electrical organization, the campaign will not interfere with normal seasonal activities, but will offer

(Concluded on Page 4, Column 5)

Richard Nelson Joins Gale Products Staff

GALESBURG, Ill.—Appointment of Richard G. Nelson to the refrigerator department of Gale Products has been announced by L. H. D. Baker, sales manager of the organization.

Mr. Nelson formerly was domestic sales manager of Universal Cooler Corp.'s utility division, and has been district manager and assistant sales manager for Leonard. He also has been associated with Frigidaire and Westinghouse in manufacturing and engineering capacities.

In his new position with Gale, Mr. Nelson will be engaged in special field sales promotional work.

Latest Price Quotations Commercial Credit Is In Small Loan Field

BALTIMORE—Preparing to further diversify its operations by entry into the small loan field on a national scale, Commercial Credit Co. is organizing several industrial banks and small loan companies as subsidiaries, it was revealed in a statement by A. E. Duncan, board chairman, accompanying the firm's 28th consolidated annual report.

Commenting upon steps being taken toward diversification of the company's activities, the report stated:

"The business now engaged in by many banks and small loan companies of making loans directly to individuals upon their automobiles, or the purchase by them of automobiles, refrigerators, radios, machinery, etc., secured by liens thereon, and the making of so-called 'character' and 'co-maker' loans to individuals, repayable in monthly instalments, is profitably employing very large resources. This entire field offers future opportunity, from time to time, to obtain additional volume and for further diversification of the operations of the company."

"The company has for a long time been buying from dealers the instal-

(Concluded on Page 4, Column 5)

3-Year Credit Terms O.K'd In Oakland

OAKLAND, Calif.—The Appliance Dealers Protective Association has amended its "community credit policy" to permit members to advertise terms of 36 months on appliances selling for \$149.50 or more. The previous limit had been 24 months.

The action was taken, the association said, to allow its members to meet the three-year instalment plans recently put into effect in this area by some finance companies and distributors.

Refrigerators, ranges, and washers are covered under the revised credit policy. On any of these appliances selling for \$149.50 or more, the merchant may advertise terms of 36 months. When monthly payments are advertised, such payments may be shown at the 36-month rate, instead of for 24 months, as had been the case in the past.

(Concluded on Page 4, Column 5)

S-W Special Is \$119.95

CHICAGO—In the only change in price affecting its 1940 refrigerator models, Stewart-Warner has dropped its special 6-cu. ft. unit from \$129.95 to \$119.95. All other prices remain the same as originally announced, says Charles R. D'Olive, manager of the appliance division.

Another 6-cu. ft. model retailing at \$139.95 retains that price, but is now being offered with additional equipment. A built-in vegetable crisper and a split shelf in the bottom of the cabinet are now standard on this model.

Hotpoint Prices Down

CHICAGO—Price revisions of from \$5 to \$20 on six models in the Hotpoint 1940 refrigerator line were announced last week by Edison General Electric Appliance Co., Inc.

The special model (120EA63) in the 6-cu. ft. class has been reduced from \$129.50 to \$114.75; model EA640 from \$149.75 to \$139.75; model EA840 from \$199.50 to \$179.50. In the 120EB line, model 43 has been reduced from \$139.50 to \$129.50; model 540 from \$164.75 to \$159.75; and model 640 from \$179.75 to \$169.75. All prices are for the Chicago zone.

In addition, model 120EA440, which had not previously been priced in the line, is included at a list price of \$129.50.

\$100 Even For Sears

DETROIT—In its bid for the low price market in the electric refrigeration field, Sears, Roebuck & Co. has advertised in a near-full-page spread in a local newspaper a 6-cu. ft. "special" model at a cash price of \$100 even.

The refrigerator advertised bears a striking resemblance to some of the company's 1939 units, but appliance department officials in local Sears' stores maintained that it was definitely a '40 model.

Stressed in this advertisement is the fact that this "equipped" Cold-spot can be had "at a price less than you'd pay for a 'stripped' model." However, the "equipment" so emphasized consists of a covered porcelain vegetable drawer, an open wire fruit basket, and an uncovered glass cold storage tray beneath the evaporator, and an automatic interior light.

Pointing to this phase of its sales story even more, the company asks

(Concluded on Page 2, Column 5)

York Packages Its Commercial Line For 1940

**Distributors See Household
Unit, Beverage Coolers,
Air Conditioners**

By George F. Taubeneck

NEW YORK CITY—York is putting big things in neat packages this year. Eastern distributors who came to a preview of these packaged items Saturday Feb. 10 at the Hotel Astor here saw the following interesting items:

A 15-cu. ft. farm refrigerator with meat hooks on one side of the cabinet instead of shelves.

A 15-cu. ft. household refrigerator for big families and those who do a lot of entertaining.

Self-contained air conditioners in units from 2 to 15 hp.

Four models of "Cold Well" water coolers.

Six models of dry beverage coolers.

A complete line of beer dispensing and pre-cooling equipment.

A FlakIce machine for turning out ice ribbons.

Four models of self-contained reach-in refrigerators, ranging from 15 to 45 cu. ft., and each available in three different types of refrigeration systems.

The York-Allis Chalmers turbo compressor line, ranging in capacity from 150 to 1,000 tons of refrigeration.

The Roller-Seal cold storage door. To present these products Joe Rosenmiller (manager of the sales promotion division) put on a show that wasn't just an ordinary convention-type show—it was a production. Everything was dramatic, swift, visualized, and set with appropriate musical and artistic backgrounds.

His most showmanlike presentation was a history of refrigeration done with backlighted silhouettes, recorded narration, and musical background—closing with an astounding comparison of York's earliest and latest 75-ton compressors while a band played "Pomp and Circumstance"—a fitting demonstration of the progress the refrigeration industry has made in a few short decades.

Walter Landmesser, manager of the commercial division, introduced most of the new lines. D. C. Seitz had his auditors on the edges of their seats and cheering at the finish as he staged his beer-cooling demonstration, and P. H. Carlson delineated the needs of the locker storage market.

R. E. Miller, manager of the industrial division, discussed water-cooling applications in baking, dairying, carbonated beverage bottling, hotels, and office buildings; and W. E. Barnum presented the air conditioning line.

President Stewart Lauer, General Sales Manager John Hertzler, E. R. Walsh, Jr., and W. R. McGinnis were also on the program.

The Yorkaire line of self-contained air conditioners for commercial establishments, which has been on the market for three seasons, has been expanded to include units from 2 to 15 hp.—covering almost every commercial application of air conditioning where compact, readily movable equipment is required.

A number of models are now available in the Yorkaire family. The Yorkaire 225, 275, 350, 475, and 550 are used in small to medium-sized business places, where the conditioner is within the sales area.

These units are housed in handsome upright cabinets requiring very little floor space. They can be used with or without ducts for air distribution.

The Yorkaire, 700, 1000, and 1500 are used in medium to large-sized establishments where the conditioner is concealed in the basement or ante-

(Concluded on Page 2, Column 1)

Newark Housing Authority Plays Leap-Frog With Contract

**First Kelvinator Has It (Order for 1,734 Refrigerators)—Now It's Westinghouse—USHA
Washes Its Hands—Authority's Five Cost Items Difficult To Figure**

NEWARK, N. J.—Westinghouse was awarded a contract for 1,734 electric refrigerators by the Newark Housing Authority here last week at a base price of \$106,338.06, following the rescinding of the contract which had first been made to Kelvinator.

Mayor Meyer Ellenstein and City Finance Director Vincent Murphy had raised objections to the original award to Kelvinator, on the grounds that they did not have a "clear picture" of the difference between the low bidders. The dispute, which may yet reach the courts, arose over the "intangible" factors of replacement and service costs, required in United States Housing Authority specifications.

The action was taken by the Newark Housing Authority over the objection of the authority's chairman, Charles P. Gillen, who expressed disapproval of "this somersaulting." Bulk refrigerator contracts on Federal Housing projects, long a source of headaches to manufacturers, have in many instances been made to include five cost items; (1)

the base bid, which is the actual cost of the refrigerators, (2) laboratory test bid, which is the guaranteed cost of having specifications qualified by an independent testing laboratory, (3) Guaranteed cost per unit for necessary replacements, (4) Charge for each service call, and (5) Guaranteed estimate of 10 year energy consumption.

Difficulty in interpreting the figures submitted in two of the five items has left considerable room for political footballing and local pressure, some manufacturers complain, particularly since the decisions are made by local Housing Authorities, with final approval of the USHA. As the specifications do not call for an exact number of units that must be replaced, or require any definite percentage of the total per year, and because total service costs may be dependent upon many things, including management of the project and the disposition of tenants to give refrigerators no more than normal use.

In the Newark situation the award was first made to Kelvinator on a

base bid of \$107,523. Consideration was given to the lower replacement cost offered by Kelvinator—\$33.33 per unit, against \$42.64, asked by Westinghouse, and a lower service charge of \$1.50 per call, against a second bid of \$2 per call.

Following the award of the Kelvinator contract, which was later rescinded, Westinghouse entered a formal protest supported by Mayor Ellenstein and City Finance Director Vincent Murphy. When the Kelvinator contract was thrown out, the local authority announced that it would readvertise for bids. Instead of doing this, the authority re-awarded the contract to Westinghouse.

A letter from Mayor Ellenstein supporting Westinghouse, which had been read at an earlier executive meeting of the authority, was made public at the Mayor's office on Feb. 10. The letter stated:

"It seems to me that all the equities are on the side of the Westinghouse company in their contention that they are the low bidder, at

(Concluded on Page 4, Column 1)

York's Packaged Units Include Beer, Bottle, Water, & Reach-In Coolers

(Concluded from Page 1, Column 5)
room, and air is distributed by means of ductwork.

These larger conditioners are sectional in design and can be easily moved in and quickly assembled to form a single, complete unit.

Yorkaire 225 is made in a small cabinet with a complete air conditioning system, carefully engineered to take up the smallest possible space. The air conditioning is controlled by two simple dials and an adjustable air outlet grille on top.

The Yorkaire 225 can be equipped for heating and ductwork when needed, and is easily disconnected and reinstalled if the owner moves.

BEVERAGE COOLERS

York is this year invading the bottled beverage cooling market with a complete line of dry beverage coolers. Mr. Landmesser estimates that the American public consumes sixteen billion bottles of beer and soft drinks annually. These bottles, of course, must be served dry, cold, and sanitary.

There are a number of "Musts," besides those above, to be observed in modern beverage cooling, Mr. Landmesser declares. Some of the most important are:

Must keep brand labels on, must not soak off tax stamps, must eliminate "dunking" hands in ice water, must be easily accessible, must save time, must have eye appeal, must be easy to clean, must eliminate "fishing" for bottles, must be economical to operate, and many others.

There are six models of York beverage coolers, available in capacities from 10 to 36 cases of 12-ounce bottles per day, cooled by either gravity or forced air, with refrigerating unit self-contained or remote as desired.

The gravity cooling system consists of a number of refrigerated plates between bottle storage sections, which cool by direct contact and by gravity air circulation.

In the forced air system a fan circulates air from the cooling coils throughout the entire cabinet, providing uniform refrigeration in all sections.

Each of the York dry beverage coolers has a Cafolite serving shelf, molded hard rubber easy-sliding lids, rounded front corners, and all models fit under any bar or counter.

WATER COOLERS

As younger brothers to the "High-K" stainless steel plate water cooler, York is introducing the "Cold Well" water coolers in 3 and 5-hp. models—with complete equipment for correct water cooling in a modern-style cabinet.

The Cold Well water cooler has a "temperature selector" dial which assures uniform controlled water temperature anywhere between 34° and 50° F.

The sanitation problem is taken care of by using stainless steel for the entire water circuit, consisting of distributor, cooling plates, and reservoir.

Simplicity is obtained by building

the entire cooler in a package-assembled, charged with refrigerant, and tested before leaving the factory.

The Cold Well water coolers are available in four models—a light-duty 3 hp., a heavy-duty 3 hp., a light-duty 5 hp., and a heavy-duty 5 hp.

Their range of applications is not limited to the bottling industry. Bakery water cooling, dairy water cooling, drinking water systems, and industrial processing—all are examples of the application of this unit.

BEER DISPENSERS

The beer dispensing and pre-cooling equipment, which features the circulation of ice cold water around the beer lines from the keg to the faucet and kegs, has the following components:

Precooler where the kegs are stored.

Pump which circulates ice cold water through the system.

Refrigeration reserve in the form of extra ice for heavy draw periods. Chill chamber which cools both circulating water and air in the pre-cooler.

Fan which circulates air over the evaporator.

Dispensall (beer dispenser) to which the faucets are attached.

Flow control beer faucets.

Indicating thermometer.

Temperature selector (thermostat) which automatically starts and stops the circulating pump.

Insulated rubber duct—through which circulating water and beer lines pass from pre-cooler to Dispensall.

CO₂ gas drum which supplies pressure for the kegs.

Beer kegs.

York condensing unit.

Models are available for every beer dispensing application—from the small under-bar, self-contained, two-keg installation up to the large hotel and tavern installation where as many as 18 kegs may be on tap at the same time.

York Dispensalls (the faucet boxes) are supplied in four distinct types. Any desired combination of Polar Flow Beer faucets, water faucets, seltzer faucets, ice cube makers, and bottled beer coolers can be obtained as standard equipment.

Mr. Seitz claims that the York Polar Flow systems definitely eliminate the following bartender's headaches: sour beer, morning beer, faucet spit, wild beer in the keg, wild beer in the lines, flat beer in the keg, leaky kegs, frozen beer, too much collar on a small glass, cleaning loss, wild beer during rushes, beer too warm or too cold, warm keg tapping, bar flies, lost space.

FLAKICE MACHINES

The "Cold Magic" FlakIce machine is a completely self-contained unit capable of producing up to 2,000 pounds of FlakIce Frosty Ribbons per day.

Ice ribbons can be made as needed—60 seconds after starting the machine. Ice is made on a slowly revolving cylinder, partially submerged in water to form curved ribbons of pure ice, broken and ready for use.

Refrigerating equipment is con-

tained within the unit—only water and electrical connections are necessary.

Up to this time FlakIce machinery (invented by Crosby Field, past president of the A.S.R.E.) has been available mainly to the large distributors and packers of foodstuffs, using large quantities of ice, but this new Cold Magic model places FlakIce equipment within reach of all commercial establishments that need ice intermittently.

The uses of FlakIce Frosty Ribbons are many. For foods on display in cafeterias, delicatessen stores or butcher shops, for goods packed for shipment, for sausage manufacturing, for bottled milk crates, for iced drinks at soda fountains and taverns, for cold dishes in restaurants, and for other applications.

The unusual shape of the flakes—ribbon thin and slightly curved—not only allows intimate contact between the ice and packed produce, but also provides greater cooling surface. No crushing is necessary.

REACH-IN REFRIGERATORS

This year, for the first time in its history, York is placing on the market a complete line of self-contained commercial reach-in refrigerators from 15 to 45 cu. ft.

Three different refrigeration systems for each size of York reach-in refrigerators are available: Fil-temp system, Gravi-temp system, and Iso-temp system.

Where temperature, humidity, air movement, and air purification are all of importance, such as in delicatessens and bakeries, the Fil-temp models are recommended.

They each contain a miniature air conditioning system, which automatically maintains proper temperature, high relative humidity, and proper air circulation by means of a small centrifugal fan, and cleanses and removes odors by means of an activated carbon filter in the air stream.

The Gravi-temp system is used where the storage of odorous foods is not a problem, such as in restaurants, hospitals, and butcher shops, where the food turnover is rapid.

Its design consists of an over-size fin coil in the upper rear of the box, whose wetted surface maintains proper food-preserving temperature, high humidity, and induces a gentle air circulation, cleansing dust and dirt from the air.

Iso-temp operates on exactly the same principles as the Gravi-temp system, with the addition of ice cube trays, and provides only slightly less humidity. Correct food preservation temperatures are maintained, a generous supply of ice cubes is quickly available, adequate humidity retards shrinkage and excess drying out of foodstuffs, and a gentle gravity air circulation is set up.

In the York Roller-Seal door there has been a complete swing from a horizontal panel front to a vertical ribbed styling. Besides presenting a modern appearance, the design utilizes the strength of all front members to add rigidity to the door.

The vertical, streamlined construction of the door front prevents the accumulation of moisture and dirt. Rigidity is achieved with three cross braces locked in a recess in the one piece side stiffeners supplemented by diagonal steel braces set in tension.

While the economy of a double seal has long been recognized, freezing, sticking, and frequent damage to the inner seal has caused some refrigerating plant operators to remove this seal in the interest of easier operation. This seal was made by compression between the back face of the door and a gasket attached to the stop.

The new door works on an entirely different sealing principle—from which it takes its name. The inner gasket is attached to the edge of the door instead of the frame. It seals by a combined rolling and wedging action between the edge of the door and the frame.

Insulation is accurately fitted and sealed with water-proof adhesive, supplemented by layers of moisture-proof paper at front and back.

Refrigerator Prices (As We Go To Press)

(Concluded from Page 1, Column 4)
in this advertisement, "Would you buy an automobile without complete dashboard equipment?" Saving readers the trouble of forming their own answers, the advertisement continues—"of course not! Then don't buy an electric refrigerator with skimpy equipment."

The company's \$5 down payment proposition is prominently featured in the advertisement.

Detroit prices for the new Sears Coldspot line follows:

Model	Capacity	Price
Challenger (stripped model)	6 cu. ft.	\$ 89.95
Special	6 cu. ft.	100.00
Standard	4 cu. ft.	89.50
Standard	6 cu. ft.	112.75
Gold Seal	6 cu. ft.	129.50
Super	8 cu. ft.	149.50
Super	8 cu. ft.	*169.50

*Tentative price which may be lowered.

Phiko Prices Listed

PHILADELPHIA—Retail price of \$119.95 has been established for Philco's "special" 6-cu. ft. refrigerator in the 1940 line, according to the new schedule announced Feb. 10 by W. Paul Jones, head of the company's refrigerator division.

Next "six" in the Philco line is priced at \$147.50, with others scaling up to \$217.50 for the deluxe model with Conservador. Eight-foot models are priced from \$197.50 to \$257.50. Complete price schedule follows:

LH-8 (Conservador)	\$257.50
LF-8	237.50
LT-8	197.50
LH-6 (Conservador)	217.50
L-6	207.50
LF-6	197.50
LC-6	187.50
LT-6	177.50
LS-6	147.50
LX-6	119.95
LC-5 (Conservador)	167.50
LS-4	137.50

Price of the LX-6, the \$119.95 unit, is \$30 less than that of the comparable model sold by Philco last year, said Mr. Jones.

Crosley Prices (New York)

NEW YORK CITY—New schedule of prices on Crosley 1940 model refrigerators in the New York area has been announced as follows:

6-Cu. Ft. Models	
LW9-60	\$ 99.95
MW9-60	109.95
MLA9-60	119.95
MA9-60S	139.95
MB9-60	159.95
8-Cu. Ft. Models	
MA8-80	169.95
MB8-80	199.95
ML8-80	219.95
7-Cu. Ft. Models	
MB7-70	179.95
ML7-70	199.95
MLS7-75	259.95
5-Cu. Ft. Models	
MA9-50	119.95
MB9-55	149.95
ML9-55	179.95
4-Cu. Ft. Models	
MA9-40	119.95
MB9-45	139.95
ML9-45	159.95
3-Cu. Ft. Model	
LA9-30	109.95

Stix-Baer-Fuller To Sell Full G-E Line

ST. LOUIS—Stix-Baer-Fuller department store here has been appointed a General Electric dealer, and will feature G-E appliances in the newly remodeled electrical appliance department and in the "Hoosier Kitchen," an all-glass model electric kitchen designed for small homes. R. G. DeHart will be in charge.

IT'S PEERLESS ALL THE WAY

NEW GUN COOLERS

TRIGGER CONTROL — FLASH TUBE COIL

NEW UNIT COOLERS

WIDE RANGE OF APPLICATIONS, FLASH TUBE COIL

NEW VALVES

A VALVE FOR EVERY PURPOSE

NEW CANNON COOLERS

FOR ALL COMMERCIAL APPLICATIONS FROM 1 TO 10 TON CAPACITY FLOOR AND CEILING MODELS

SEE YOUR JOBBER FOR 1940 CATALOG

PEERLESS OF AMERICA, INC.

MIDWEST FACTORY, GENERAL OFFICES — 515 W. 35TH STREET, CHICAGO
NEW YORK FACTORY PACIFIC COAST FACTORY SOUTHWEST FACTORY EXPORT DIVISION
11-20 34TH STREET 3000 SOUTH MAIN ST. 2218 N. HARWOOD ST. P. O. BOX 616
LONG ISLAND CITY LOS ANGELES, CALIF. DALLAS, TEXAS DETROIT, MICH



Packaged Air Conditioning It Meets Your Customer's Demands!

THE Curtis line of packaged air conditioners meets the growing demand of all classes of retail establishments for effective, efficient cooling—yet these units eliminate costly installation expense.

You can sell this rapidly expanding market that includes retail stores, offices, restaurants, banks, beauty parlors, etc., with Curtis packaged air conditioning units that require only water and electrical connections to install.

There's a wide range of capacities, from 3 to 15 tons. Both the Curtis Store and Office Cooler and the Curtis Remote or Central Type Air Conditioner are complete factory designed, packaged air conditioning units that mechanically cool, dehumidify, circulate and filter the air. They are quickly and easily installed without disturbing store fixtures and are adaptable for heating if desired.

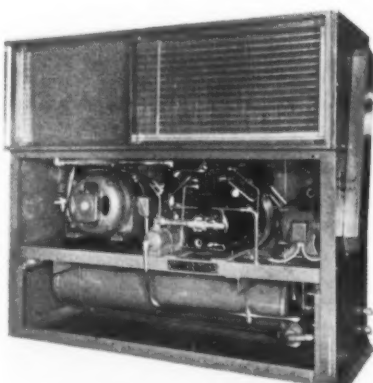
The packaged air conditioning market is a fast growing source of sales and profits. Write for complete information on the Curtis line.

CURTIS REFRIGERATING MACHINE COMPANY

Division of Curtis Manufacturing Co.

1912 Kienlen Avenue

St. Louis, Missouri



7½-10-15 Ton Complete Remote or Central Type Air Conditioner



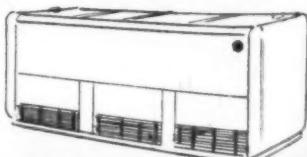
3 and 5 ton Packaged Type Air Conditioner

● The Curtis line of Condensing Units includes sizes from 1-8 to 30 h.p., air and water cooled. There's a Curtis model for every refrigerating or air conditioning requirement, each precision engineered to deliver economical, trouble-free performance throughout an exceptionally long life.

PELCO BEVERAGE COOLERS

MAKE THEIR OWN FLOATING ICE

Great daily capacity—amazingly fast cooling—extremely inexpensive to operate. Deluxe models. Write for catalog of complete 1940 line.



PORTABLE ELEVATOR MFG. CO., BLOOMINGTON, ILL.



● Illustrating the 8 ft. Model Ideal Wet Beverage Cooler (Self-Contained).

**An Amazing
Sales and
Profit
Opportunity
For You**

The New, Sensational IDEAL "SPEED COOLER"

(Wet or Dry)

**The Fastest Selling, Fastest
Cooling Beverage Coolers Ever
Offered to the Trade**

Wherever they have been presented, Ideal Speed Coolers immediately lead the field in sales. Ideal distributors quickly forge ahead to leadership in their territories — because of Ideal's many, quickly appreciated advantages.

Ideal Speed Coolers offer your customers these sensational features:

1. Faster Cooling

In test after test Ideal Speed Coolers have proven their ability for amazingly fast cooling. *The Ideal Dry Beverage Cooler is capable of cooling three times as fast as conventional coolers on the market today.*

2. Thermal-Fin Cooling Coils (Pat. Pending)

The Thermal-Fin Coil needs no explanation. A mere glance reveals even to the layman that every successful refrigeration principle has been utilized to assure maximum efficiency.

Besides having an enormous amount of prime surface, the added Thermal-Fin plates make possible the amazingly fast cooling of the Ideal by utilizing a combination of radiation, conduction and convection, the fastest method known in beverage cooling.

3. No Stopping — No Defrosting!

The user sets the thermostat to the desired temperature, and the Ideal unit does not stop operating until that temperature is reached. It's never necessary to stop the unit to defrost an Ideal Dry Cooler.

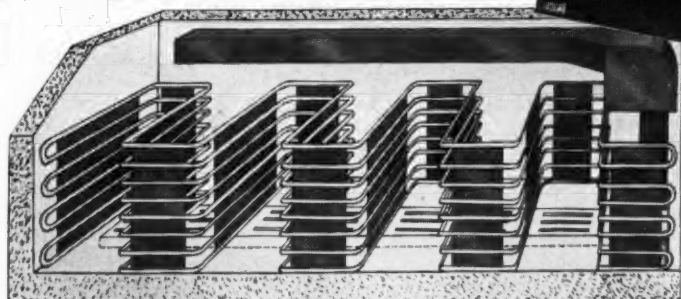
4. Separate Cooling Compartments

The unique design of the cooling coils in Ideal models separates the cooling space into compartments so that different brands are kept separate. There's no hunting around, no delay in picking out the brand of beverage desired.

5. Made By Specialists

Ideal Speed Coolers are manufactured of the highest quality materials by a company that for years has specialized in building only beverage coolers. Ideal knows and understands the problems of users as well as **dealers** in this important field.

Ideal's success is the result of the PERFORMANCE of Ideal Coolers.



● Above: The Ideal Dry Beverage Cooler (Remote Type), 8 ft. Model with eight cooling compartments.

● Left: The revolutionary Ideal Thermal-Fin Cooling Coil (Pat. Pend.).



General Specifications

Ideal Dry Beverage Coolers (Remote Type)

Sizes	Cooling Compartments	Storage Capacities
5 feet	5	25 Cases
7 feet	7	35 Cases
8 feet	8	40 Cases

Ideal Wet Beverage Coolers (Self-Contained Type)

Sizes	Cooling Compartments	Storage Capacities
6 feet	6	15 Cases
7 feet	7	17½ Cases
8 feet	8	20 Cases

The first announcement of the new Ideal Speed Coolers brought inquiries from dealers throughout the country. Act quickly if you want this profitable line for your territory—send the coupon today.

Act Now!

Ideal offers you a chance to cash in on this tremendous sales and profit opportunity. Be the first in your territory to take command and lead in sales in the profitable, fast-growing, beverage cooler field. Your market is ready—Ideal gives you the answer to demand. Remember—it sells faster because it cools faster.

Rush the coupon for complete information on Ideal Speed Coolers. It's an opportunity you can't afford to pass up. Mail it today.

Ideal Beer Cooler Company
2953 Easton Avenue, St. Louis, Missouri

Please send me at once, detailed information about the Ideal line.

Name.....

Firm.....

Address.....

City..... State.....

IDEAL BEER COOLER COMPANY 2953 Easton Avenue, St. Louis, Mo.

Newark Officials Admit Bewilderment At Complicated Bid Specifications on Housing Project Refrigerators

(Concluded from Page 1, Column 4)
least as far as tangibles are concerned.

"I assume that members of the authority are entirely familiar with the situation that the City Commission as a whole, including myself, has always endeavored to uphold and promote the industrial development of Newark.

"Without going into details—I would ask you to bring to the attention of members of the local housing authority the fact that we should not, as city officials, penalize an industry located in this vicinity—no matter how small. In fact, all doubt should be resolved in favor of the local industry."

THE MAYOR IS FRANK

Mayor Ellenstein said he had been informed by C. E. Stevens, vice president of Westinghouse, that the company employs 6,000 workers in and around Newark at an annual payroll of \$9,000,000. The Westinghouse Co., the Mayor said, is also a substantial taxpayer.

"In view of this," the mayor wrote, "I would urge upon the housing authority that they use every legal means at their command in favor of the Westinghouse company."

The resolution to re-award the disputed contract to Westinghouse was moved by Frank Maguire and seconded by Howard A. Lett, and approved by Arthur C. Gillette, with Chairman Gillen in the negative.

CALLS TERMS 'SPECULATIVE'

Maguire's resolution included this clause: "The acceptance of the Kelvinator bids, subject to the approval of the United States Housing Authority, was based in part on the consideration of items which were speculative, not called for by the specifications, and not set forth in the bids."

Another clause in the resolution stated: "The Westinghouse base bid plus the estimated cost for electrical energy for 10 years is \$727.31 lower than the Kelvinator base bid plus the estimated cost of electrical energy for 10 years."

Maguire, who Jan. 17 moved that the entire matter be turned over to the USHA, only to have it returned without decision, was supported by an opinion of Dr. Milton R. Konvitz, authority counsel.

Further support of the Maguire resolution was given in a telegram from Nathan Straus, USHA administrator, which said: "We consider equitable evaluation of bids shows Westinghouse low. Further it seems urgent that refrigerators be purchased since tenants are to move in March 1 and delay will be costly. However, you are entirely within your rights in re-advertising with clarified evaluation clause."

In opposing award of the contract to Westinghouse without re-advertising, Chairman Gillen declared that "by changing position so quickly, we lay ourselves open to criticism from the outside." He added that he was sure Kelvinator would contest the award in court.

U.S.H.A. ACTION NEEDED

Mr. Konvitz said the clauses in both the rescinded Kelvinator and the granted Westinghouse awards stipulated: "Subject to USHA approval." Therefore, he pointed out, the local authority's original Kelvinator award could not be construed as final, since USHA action was needed. In that case, he argued, the award, not being final, was open to discussion or change.

Mr. Lett declared that "if we re-advertise we will be in a far more precarious position than now."

Mr. Gillen urged that the controversy between Westinghouse and Kelvinator be arbitrated before a definite award was made. In this proposal he backed a suggestion made to the authority by John D. Cassidy, Kelvinator sales representative, who appeared before the board.

Mr. Cassidy stated that he had been in Washington Feb. 8 and had discussed the matter with various individuals including John T. Egan, Region 2 director of the USHA. He said Egan approved arbitration "if it was agreeable all around."

SEEKS 'CLEAR PICTURE'

City Finance Director Vincent Murphy of Newark, blocked the award of the contract to Kelvinator after Westinghouse made the claim that its base bid of \$106,338.06 was low. Mr. Murphy asked the housing board for a "clear picture" on the difference between the low bidders, and also wrote Nathan Straus, administrator of the USHA, asking that federal approval be withheld "until satisfactory answer has been made (by the local housing authority) to the Westinghouse company and to myself."

Charles P. Gillen, chairman of the local housing authority, in announcing the resolution rescinding the award, stated that both Westinghouse and Kelvinator have threatened to sue for the award, thus tying up deliveries. He explained that rescinding the award and advertising for new bids would be the best way to prevent litigation.

Basis of the dispute was what should be included in the base bid and what figure should be used in awarding the contract. A breakdown of the bid revealed that either company might be found to be "low"—depending on the figures used. The breakdown follows:

How the Bids Lined Up on the 5 Items

	Kelvinator	Westinghouse
Base bid for 1,734 refrigerators.....	\$107,523.00	\$106,338.06
Laboratory test bid	300.00	500.00
Replacement of cooling unit.....	33.33	42.64
Service calls (each)	1.50	2.00
10-year energy consumption	43,715.16	44,161.92

(The figure for "laboratory test bid" is a requirement of the U. S. Housing Authority for a guarantee on the cost of tests to qualify the specifications which are submitted in the bid. This is done by some neutral engineering testing firm, and consists of measuring the insulation, testing the capacity of the refrigeration unit, etc., which have been specified.)

In correspondence with Administrator Straus, Mr. Murphy wrote, "In reading over the conclusion which the Housing Authority reached in awarding this contract (to Kelvinator) I do not get a clear picture as between the price of the two lowest bidders."

"Will you be good enough to give me a resume of the specifications and bids themselves so that I may have an opportunity to digest them. It may be possible that after this digest, I may reach the same conclusion that the Housing Authority has reached. I am, however, in doubt. . . ."

WHERE BIDS DIFFERED

When Kelvinator was awarded the contract Jan. 29, Neil J. Convery, executive director of the authority, explained Kelvinator offered a guarantee of 10-year energy consumption lower than Westinghouse.

Where Westinghouse lost out on the first award, Mr. Convery said, was in its laboratory test bid of \$500 against Kelvinator's \$300; engineering service calls at \$2 each against Kelvinator's \$1.50; and a higher cost of replacement units.

In protesting the first award, F. R. Kohnstamm, sales manager of the Westinghouse merchandising division, discussed the deciding factors as set forth by Mr. Convery. He pointed out base bid, plus cost of operation plus maintenance bid showed Westinghouse low by \$159,169.98 against

\$159,908.46, a difference of \$738.48.

Of the other bids, Mr. Kohnstamm wrote: "The point was raised that Westinghouse was higher than Kelvinator on the cost of the replacement unit. This is true, except that no factor is provided as to the number of replacement units weighed. The practical application of this factor is impossible to determine since the number of replacement units that may be required during the four-year period depends on quality of original mechanism, usage

of tenant, and guarantee on replacement unit itself.

THE GUARANTEE MATTER

"Although no guarantee on the replacement unit itself was requested, Westinghouse offered to guarantee replacement units for one year. This is felt to be high evidence of Westinghouse's inherent quality for numbers of units could be changed in the same cabinet should an inferior product be furnished."

"The need for emergency service beyond the 15% provided in the specifications depends on the ability of the project manager to keep down useless calls. It is felt that 15% of the total number of refrigerators per annum furnished free should be ample. The charge per call of \$2 by Westinghouse versus \$1.50 by Kelvinator should have no consideration."

The resolution rescinding the award to Kelvinator, passed by the Newark Housing Authority, read as follows: "That the resolution of the previous meeting accepting the bid on Kelvinator, subject to U.S.H.A. approval, be rescinded; that all bids for refrigerators be rejected; that the proper officers be authorized to re-advertise for bids, new specifications requiring the bids be figured on specified replacement requirements; provided that this resolution does not take effect unless approved by the U.S.H.A."

FACTORS ARE 'INTANGIBLE'

Declaring that it was the only "fair and businesslike" way of handling the matter, Arthur C. Gillette of the local housing authority pointed out the clause on "specified replacement requirements" would forestall further dispute.

When the first award was made, Mr. Convery said, Kelvinator won out on the additional "intangible" factor of its lower cost replacement units.

Mr. Convery announced last week that it was likely the replacement specifications would be set at 1% of the total number of units per year.

When the bids were studied after their submission Jan. 11, it was thought that the "intangible" factors of service and replacement probably would cause difficulty in the award. The local authority then voted to put the case up to Washington. The U.S.H.A., however, returned the matter to the local board and told it to make its own decision. It was then that the disputed award was first made to Kelvinator.

Commercial Credit Enters New Field

(Concluded from Page 1, Column 3)
ment obligations of purchasers of automobiles, refrigerators, radios, machinery, etc., secured by liens thereon, which business will be aggressively continued. In order to make loans to many owners of automobiles, especially to customers of the company who occasionally want to borrow money upon their cars, and for which the personnel of the company is already specially trained and experienced, the company is now in the process of organizing, as subsidiaries, several industrial banks and small loan companies in the various states.

"As time goes on, these subsidiaries can further extend their operations to include the making of loans to individuals and others for the purchase of automobiles, refrigerators, radios, machinery, etc., secured by liens thereon, and also to the making of so-called 'character' and 'co-maker' loans to individuals, repayable in monthly instalments."

The company report showed that gross volume of all receivables acquired by the firm during 1939 was \$625,869,943, compared with \$524,345,720 for 1938. In this connection it was pointed out that collections during the year exceeded new receivables acquired so that average cash employed was \$39,382,205 less than during 1938. This reduction, together with generally reduced financing rates, resulted in a smaller net income. Operations also were adversely affected by the Chrysler strike last year, the report noted.

Net income from operations available for dividends, after deducting minority interests and provision for all federal and other taxes, was listed as \$7,913,653 for 1939, compared with \$8,997,363 the previous year.

Oakland Assn. Extends Terms on Appliances

(Concluded from Page 1, Column 3)

Also, in advertisements mentioning specific down payments, the merchant may now use either \$5 or 5% of the price, whichever is the lowest. "No down payment" advertising still is barred by the credit policy, and no merchandise may be sold for a credit period of more than 90 days without a carrying charge.

On all appliances and other merchandise except refrigerators, ranges, and washers selling at \$149.50 or more, the two-year credit limit still applies.

Wesco Puts Up \$10,000 In Salesmen's Prizes

(Concluded from Page 1, Column 2)
salesmen chances to compete in both seasonal and sustained contests at the same time.

Drive will cover all Westinghouse products distributed by the Wesco organization, and will be directed by A. W. Sullivan, Wesco sales promotion manager, New York City. It is patterned closely after the "harvest campaign" staged during September, October, and November of last year.

Announcing A NEW BUSH CATALOGUE

40 PAGES OF FACTS and FIGURES OF DEFINITE VALUE TO YOU!

WRITE FOR IT TODAY!

THE new Bush catalog, just off the press, is packed from cover to cover with information of definite value to all air conditioning and refrigeration engineers. For each product in the extensive Bush line, there is data, accurately compiled and clearly presented, giving actual exposed surface, dimensions, list prices, etc. By simply asking for it you will receive this concise, practical manual which contains, in a nutshell, plenty of real meat about Finned Tube Products. This catalogue is free of charge—and free of superfluous material. You'll be glad you sent for it.

For 33 years the name BUSH has stood for quality in Finned Tube Products. Today the Bush line is more popular than ever—and more complete. It covers finned tubing, replacement condensers and unit coolers in variety wide enough to meet virtually every requirement. Discover for yourself that, in specifying BUSH, you get a standard of value that is SUPERIOR.



Increased CAPACITY and EFFICIENCY with this Heat Interchanger...



• This new Mueller Brass Co. Heat Interchanger, owing to its shell and tube construction, provides maximum heat transfer with minimum pressure drop. This compact unit can be easily installed near the evaporator outlet where it will be most efficient. Furnished in two sizes with 79 and 170 square inches of heat transfer service. Order through your jobber.

MUELLER BRASS CO.
PORT HURON MICH.



Go Get the Business — WITH KELVINATOR'S 1940 COMMERCIAL LINE...

TWO-YEAR RESEARCH
PROGRAM REDUCES
PRICES
AS MUCH
AS **30%**



The finest condensing unit Kelvinator ever built. New refinements bring even quieter performance, more economical operation, longer life.

**Sell The Name Your Customers Know
and Trust — At Prices That Mean
Business, All Year 'Round**

YOU CAN START right in to sell this equipment, for the name is already sold! That's one less sales hurdle, one positive selling advantage every Kelvinator dealer enjoys.

Now, from the renowned Kelvinator cabinet plants, from the modern Kelvinator laboratories, from the efficient Kelvinator factories comes the most advanced, salable equipment ever built. The combined brains, skill and facilities of one of the largest manufacturers of electric refrigeration gives you a great line, *built by a great company.*

This is the mark of maturity.

You'll get the idea when you see these new Kelvinator products. Every part of the equipment is exactly designed for its specific job. This means longer life, greater economy in operation and

space, many extra convenient features.

Exceptionally pleasing lines add eye appeal to equipment packed with fundamental sales-making features. Exteriors are all finished in high lustre Permalux... the condensing units are a standard of the industry for dependable, trouble-free operation at minimum cost.

Further, the line is so broad that you have a peak sales-maker for every season. The same quality story, the same sales-making reasons for buying... twelve profitable months a year.

Get all the specifications and you'll get this fact: Kelvinator should be *your* commercial line for 1940. For this is the line that has what it takes for you to do a profitable job. Why be satisfied with less? This is no year for makeshifts of any sort. Write to us direct for the facts.



REACH-IN REFRIGERATOR, Model R120. 20 Cubic Feet capacity, with ice maker. Line also includes R20 and R30.

FROSTED FOOD CABINET, 12-Hole Model, 1/2 H.P. unit on slide-out base. 8-Hole model also available.

WATER COOLER, Model B3, bottle type (3 gallons per hour capacity); also pressure bubbler models PB36 and PB44.

BOTTLED BEVERAGE COOLER, Model BC266. Cools 50 Seven-ounce bottles per hour from 90° to 40° F. Smaller model, BC154.

KELVINATOR

26 Years of Success in

REFRIGERATION

The Complete Line
— Completely Built
in One Plant

Kelvinator Division, Nash-Kelvinator Corporation
14250 Plymouth Road, Detroit, Michigan

Gentlemen: I am interested in selling Kelvinator Commercial Equipment. I am a () dealer, () distributor, () independent service company.

Name _____

Firm Name _____

Address _____

City _____ State _____

K-78

Gale 1940 Commercial Compressor Series Has Replacable Seal Assemblies

GALESBURG, Ill.—The 1940 line of compressors manufactured by Gale Products features self-contained seal assemblies which are said to be replacable without disturbing the shaft or the assembly of the compressor.

Cylinder body and crankcase of the compressors are cast in one piece of air furnace iron, a close-grained metal, which is said to have a high tensile strength and wear resistance. Gas leaks through the crankcase walls are thus prevented, it is claimed.

Vertical reinforcing fins on cylinder body are said to dissipate heat rapidly and uniformly, thereby preventing drop in efficiency caused by excessive expansion of the cylinder bore at the location of compression.

Compressor models RC-13, RC-19, and RC-14, are designed for small condensing units up to 1/2 hp. and are equipped with valve in pistons. RC-13 and RC-19 are single cylinder and RC-14 is of double cylinder construction. All are equipped with internal self-contained seal assemblies.

Two types of twin cylinder compressors are listed for self-contained condensing units larger than 1/2 hp. Both lines have valve in the head, oil separating strainers, check valves, and self-contained seal assemblies. The valves in these models are designed for operation with methyl chloride and "Freon-12."

Standard line of compressors consists of three sizes, RC-30, RC-50, and RC-64, all having internal self-contained seal assemblies.

Optional, more expensive line of compressors also has three models, RC-34, RC-54, and RC-64. Feature of this line is the seal and oil separating chamber. Seal is of improved design with an external self-contained assembly. Oil separating chamber is integral, extending across both chambers, which permits the use of an extra large strainer.

Both models are equipped with check valves, which are located in cylinder wall between suction port and crankcase. Design of the check valve is such that oil slugging is said to be prevented when suction pressure is reduced suddenly. It also produces a fine mist of oil for extra lubrication of valves and pistons at the start of each running cycle. This timed lubrication increases efficiency by preventing bypass of gas between pistons and cylinder walls, it is claimed, and it is also said to reduce piston wear.

Engineering Equipment Handles Anemostat In Philippines

MANILA, P. I. — Engineering Equipment & Supply Co. has been appointed Anemostat distributor for the Philippine Islands.

2-Model Policy Helps General Refrigerator

PHILADELPHIA—"Best year in our company's history," is the way in which Louis Frank, head of General Refrigerator Co., describes 1939. "And the prospects for 1940 look even better," he declares. And this despite the fact that the company has been manufacturing refrigeration equipment since just after the turn of the century.

Until recent years, General Refrigerator Co. turned out a complete line of equipment, including display cases, reach-in boxes, walk-in coolers, and dairy refrigerators, but under its changed policy has concentrated on the production of two models of display cases only. New merchandising methods also were adopted by the management.

Advantages of the new theory of operation are numerous, Mr. Frank explains. Line limitation has made possible large scale production methods with a resultant reduction in production costs, and increased sales have been made possible by the improved selling technique.

Shreveport Distributor In New Larger Location

SHREVEPORT, La.—Refrigeration Sales, Inc., Westinghouse distributor in this area, has moved into its new home at 426 Milam St. William K. Hinds, head of the firm, reports that growing business necessitated the move.

Water Saving Equipment Allays Fear of Condensing Water Shortage In N. Y.

(Concluded from Page 1, Column 1) form the basis of any rule which will eventually be formulated.

Control of the water supply, rather than curtailment of business, is the aim of investigators. The solution, according to many observers, may lie in the conversion of many ordinary systems throughout the city to systems utilizing water towers or evaporative condensers.

Only about 10% of nearly 2,300 systems in the city now have towers or condensers, yet it's estimated that a system so equipped in, say, a theater seating 1,000 people, uses only about 10 gallons a minute for makeup water, as compared to about 100 gallons a minute which pours into an ordinary system of similar size and is emptied into the sewer.

WOULD MEAN MORE SALES

A spokesman for one of the largest air conditioning manufacturers in the country, which has approximately 225 installations in the city, pointed out that a rule requiring such equipment would, if adopted, mean more business for the industry and stated that the people most worried, at the present time, are users faced with the prospect of having to invest more money.

According to Eugene Drum, Supervising Inspector in the Department of Water Supply, Gas, and Electricity, "the aim of the Department is to arrive at some solution which will conserve water and which will not prevent continued expansion of the industry in the city."

"If the city suffers the severe fate of not having any rain this spring," he observed, "more drastic measures than have ever been considered would have to be taken."

Denying reports that the Department intended now to shut down systems in some office buildings, hotels, and other structures, he said that any severe measures would be only part of an emergency situation that would affect the entire city and "we are not looking forward to any such catastrophe."

RECENT GROWTH RAPID

He also disclosed that the problem facing the Department and the industry is not entirely a product of the drought, but an outgrowth of the industry's rapid expansion in the city. In 1935, when the Department first began keeping records of every air conditioning system installed in the city, most of the systems were confined to theaters and storehouses. Certain regulations concerning contamination were written into permits, together with a clause specifying that the Commissioner had the authority to shut off the water supply "should the condition of the water supply so warrant." Though several prospective owners, confronted by this clause, protested briefly, the possibility that the situation would ever "so warrant" seemed so exceedingly remote that it was accorded little more than momentary attention and never affected an eventual sale.

Today, however, there is not only the worst drought in nearly three-quarters of a century, but in less

than a year the number of systems installed in the city has leaped from about 1,800 to nearly 2,300, with a consequent increase in millions of gallons of water. Estimating the average water supply available to the city, plus the prospect of greatly increasing consumption through new air conditioning systems, city officials conclude some regulation will probably be necessary for the next five years.

In five years, three new sources of water supply will be completed, releasing an additional 544,000,000 gallons of water to the city. If the water supply is normal throughout the five years, regulation might consist of a rule requiring the use of towers or condensers in future installations, authorities said.

Commenting on such a solution, Mr. Drum said, "The initial outlay for condensers and towers may be about 25 to 30% higher, but owners must pay for the water they use. With the great savings on water costs that would result, they'd amortize their original loan much more quickly than they otherwise could."

Tailor-Made Commercial Jobs Are Specialty Of Baltimore Firm

BALTIMORE — Such out-of-the-ordinary applications as a self-contained, visible-display mortuary cabinet for an orthodox burial chapel, and shipments to such far points as Portland, Me.; Bay Pines, Fla.; Camarillo, Calif.; Kelley Field, Tex.; and even to Porto Rico and Hawaii, were "all in the day's work" last year for J. P. Pfeiffer & Son, local manufacturer of commercial refrigeration equipment.

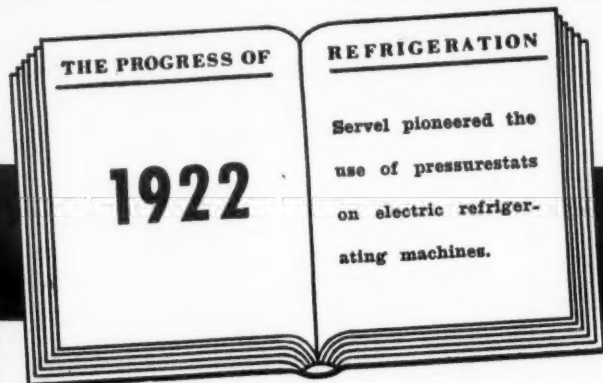
Other interesting jobs handled by this company during 1939 included: a 10-cu. ft. stainless steel constant temperature cabinet for inactivation of vaccine, designed to maintain a temperature within a one-half degree Fahrenheit range, and an eight-compartment laboratory test refrigerator with each compartment adjustable from 32 to 80° F.

Many cabinets of special design were supplied to refrigeration dealers and distributors over a wide area, for the firm encourages trade in such special items.

Orders for the year, which proved to be one of the best since the company entered business in 1888, included: 75 refrigerated display cases; 58 walk-in coolers; 184 reach-in refrigerators; 10 mortuary refrigerators; and 144 refrigeration units.

This total included 11 complete food market installations, four complete hospital refrigeration installations, and two complete hotel kitchen refrigerator installations. Refrigerators ranged in size from a 6-cu. ft. stainless steel laboratory cabinet to a 3,000-cu. ft. pre-fabricated storage room.

The equipment, designed at the Baltimore office, is manufactured either in the shop there or in associated factories to the Pfeiffer firm's specifications.



There Is No Substitute For Experience

ALL OVER THE WORLD

Servel enjoys established ACCEPTANCE



In practically every quarter of the globe, Servel commercial refrigeration products are known and preferred.

For almost two decades and in ever-increasing quantities, Servel products have been earning the respect of users, service men, dealers, distributors and manufacturers alike.

Servel products have stood the test of time!

This acceptance means more volume and more profit for you if you are selling Servel products.

Servel's "Silver Fleet" line of commercial refrigerating machines—ranging from 1/2 HP to 20 HP—is geared to the demands of modern business. Servel's controlled distribution policy insures a fair profit on every sale.

An inquiry on your letterhead will bring details. Write—today—to Servel, Inc., Electric Refrigeration and Air Conditioning Division, Evansville, Indiana.

SERVEL

COMMERCIAL REFRIGERATION
AND AIR CONDITIONING

This Sign Spells Service

ANSUL JOBBER

Service, and Quality as well. You can expect both without question from your nearby Ansul Jobber. No manufacturer can say this with greater assurance—in his own products and in the integrity of his distributive organization.

ANSUL

SULPHUR DIOXIDE
METHYL CHLORIDE
ANSUL ICE-X

ANSUL CHEMICAL COMPANY • MARINETTE, WISCONSIN

LET THE ANSUL JOBBER NEAR YOU SERVE YOU BETTER

Take the Royal Road to Profits with **NORGE** ROYAL ROLLATOR REFRIGERATION

**Here's the refrigerator
in which**

*From top to floor—
There's space galore*

To the many women looking for today's best buy in refrigeration, Norge dealers can say: "Help yourself to an extra shelf . . . at no extra cost." By offering extra food capacity without extra size, Norge dealers have a tremendous *buying* appeal . . . one that registers immediately with women.

and, then, the

*Rollator Cold-Maker
Sells Still More*

To refrigerate this extra food capacity, Norge provides the famous Rollator Cold-Maker, which has been so widely imitated . . . *but only in part*, because here is the only Rollator unit permanently oiled and sealed for long, trouble-free life . . . the only domestic unit refrigerant cooled for easy going under heaviest loads in hottest weather. Superior performance, greater economy make the Rollator the Norge dealer's best sales clincher.



A Norge for every Customer . . .

There's a Rollator-powered Norge for every home . . . the right size at the right price. Yet, the Norge line is a simple one to stock . . . and its new appeals make it a fast one to move. Because of all the great features Norge has combined to create unusual salability, many new dealers are taking the Royal Road to Profits with Norge in 1940. You, too, are

invited to join with Norge . . . provided, of course, there is still an opening in your community. Why not write today for complete information while there is still time to get lined up for a profitable new season? We'll gladly send you the facts about these new products, the merchandising and financing plans and the greatest advertising campaign in Norge history.

NORGE DIVISION BORG-WARNER CORPORATION, DETROIT, MICHIGAN
In Canada: CANADIAN RADIO CORPORATION, FLEET STREET, TORONTO

Washers and Ironers • Gas and Electric Ranges • Commercial Refrigeration

The Greater **NORGE** *for* **1940**

Write today for details!

1940

**NORGE DIVISION BORG-WARNER CORPORATION
670 E. WOODBRIDGE, DETROIT, MICHIGAN**

Please give me details of the new Norge line, the merchandising and financing plans and the greater advertising support given Norge dealers.

Name _____
Firm _____
Address _____
City _____ State _____

ERN-102

Herman Goldberg Cuts His All-Industry Show 'Gone With the Wind' To 45 Minutes

CHICAGO—Motion pictures of the Second All-Industry Exhibition in Chicago last month taken by Herman Goldberg, manufacturers' representative, are exciting wide interest throughout the industry, and Mr. Goldberg reports that already he has more than thirty requests to show the film to local organizations throughout the country.

First showing of the convention pictures was at a banquet given by R.S.E.S. in Madison, Wis. on Feb. 3.

The film, which now consists of three 400-foot reels and runs about 45 minutes, gives a moving pictorial report of almost every phase of the Exhibition. Great majority of all the booths at the show are shown, and the personnel of the different exhibitors is also pictured, doing their "turn" at the booth.

Many scenes at the All-Industry banquet are included in the film, giving a general impression of the large size of the affair, and action shots of the all-star floor show picture the entertainment in full swing.

There are shots of the National Tube Bending Contest, and of several of the meetings and parties held during the Show. Ladies at the Show have not been overlooked, many wives and "girl friends" being pictured in the film.

Those who attended the show have some idea of the big-time camera job Mr. Goldberg had on his hands. He had his camera turned on

every event that took place. Some 2,500 feet of film was used up to put the convention on moving record. When Mr. Goldberg came to count up the footage at the end of his camera wanderings, he found that it stretched about half a mile, putting it definitely in the "feature" class. After cutting and editing, the film was reduced to its present three-reel length.

On March 9 Mr. Goldberg will take the film to the R.S.E.S. State Chapter meeting at Peoria, Ill. He hopes to have Mel Knight, sales manager of Peerless and chairman of the All-Industry Show, act as commentator for the film at that meeting.

Mr. Goldberg hopes to work out a definite schedule for showing the film at different meetings throughout the country.

Murray Mfg. Takes Over Unit Cooler Set-Up

WAUSAU, Wis.—Effective last month, the entire Unit Heater & Cooler Co. manufacturing and sales setup will be taken over by D. J. Murray Mfg. Co., Wausau, Wis., the parent company.

The Unit Heater & Cooler Co. was established in 1929 by D. J. Murray Mfg. Co. as the sales organization for the "grid" unit heater and cooler. The "grid" unit heater is the all-cast aluminum radiation unit.

Regional Associations of Parts Jobbers Can Have Many Functions, Experience Shows

New England Group Has Conducted Variety of Activities In Its 2 Years of Existence

CHICAGO—Regional associations of refrigeration parts jobbers can do much to supplement and further the work of the national association, and build a cooperative rather than a too highly competitive spirit among the jobbers in a particular area, R. W. Sheperdson of Standard Supply, Inc. of Worcester, Mass., asserted in speaking before the annual convention of the National Refrigeration Supply Jobbers Association last month.

"The obstacles to be overcome in order to obtain a desirable cooperative condition in our refrigeration jobbing industry," said Mr. Sheperdson, "could be classified as follows:

"We must strive to rid ourselves of unbusinesslike and unethical selling practices. Unfortunately, these conditions exist in some localities. There are various reasons for these conditions.

"One is the trend to appoint companies as refrigeration jobbers who are not financially responsible. Unfortunately, the suppliers, who are resorting to this type of experiment, have been responsible for a letdown of the bars, and our sales organizations bring in factual evidence of serious price-cutting.

"This price-cutting may try to be

justified by so-called 'blanket-orders,' and numerous other excuses. But the greatest evil of this procedure is that it will fundamentally destroy the price structure, which should be scrupulously maintained. The refrigeration industry is young as compared with other industries of like scope, and the refrigeration jobbers have just made a start but, nevertheless, have an important position in the industry.

"Our association requires careful managing. Its officers and directors must be men of ability; men of foresight; men capable of solving problems for the betterment of the refrigeration jobber.

NEED EXCHANGE OF FIGURES

"There has been a lack of factual information and statistics for ready access. This, however, can be overcome by developing methods for speedier inter-communication. Along with this, goes the lack of common understanding as to our desirable aims and objectives; and this may be because of a lack of acquaintanceship and friendship.

"Whether we are members of a trade association operating nationally or locally, we face numerous and common problems which arise from the foregoing practical difficulties.

"Our problems break down into two parts. First, those of national significance, affecting all jobbers. A most important factor is that we have had but little business data or statistics to guide us in the maximum and minimum expenditures which we should be justified in making in regards to the experiences of our group as a whole. However, due to the diligent work of our officers, this situation is improving.

PROBLEMS PLENTIFUL

"The lack of these statistics, results in the duplication of effort, by the establishment of too many jobbers in a given area. The disastrous effect of such procedure is exemplified by the condition from other industries.

"Then too, we have the problem of competition from divisions of our own industry. This influence will play a big part and be responsible for this duplicated coverage unless the National Refrigeration Jobbers make a serious effort to correct the unsatisfactory condition that exists today. This, in turn, creates a hostile public trade opinion to the refrigeration jobber organization.

"We are also faced with lack of trade standards. I think it is enough to mention this in broad terms. Such problems, as referred to above, can best be handled by the National Organization.

"We come, now, to the significance of regional jobbing associations. What can be done to materially benefit our industry by further developing the regional associations? At the present time, there is a lack of acquaintanceship and friendship among jobbers in a comparatively small area, there is the problem of unbusiness like and unethical selling practices; in small districts, there is the lack of credit information.

THREE MAIN FUNCTIONS

"In order to function to best advantage, regional associations must fit into the general scheme of the industry.

"First, we should develop acquaintanceship and friendship with those nearest us.

"Secondly, by credit interchange work; that is, by exchanging information of interest primarily to those in a respective trading area.

"Third, we can supplement the efforts of the National Association by encouraging our members to get behind the proposals and programs outlined; and lastly, we can collectively pass on to the National Association the carefully considered and collective thinking, by our members, on matters which deserve national attention and recognition.

"Being jobbers, we can't be expected to know the fine points of the law governing the cooperative activities of large business groups. We know there are laws against actions in restraint of trade; against conspiracy to fix and maintain prices;

and against making up and circulating 'black-lists.'

"Through the contact of our representatives where we have a representative on the Board of Directors of the National Association, we can learn and can pass on to our members how best to bring our troubles properly to the front."

HOW GROUP WAS FORMED

The New England Refrigeration Jobbers Association, Mr. Sheperdson explained, came into being in March of 1938. It was felt that there was a definite need for an association of those companies in the business of the distribution of refrigeration parts and supplies.

Carl P. Payson of the C. P. Payson Co. of Springfield, Mass., asked a member from each of the refrigeration jobbing companies, in New England, to meet informally in Springfield. After preliminary discussion, it was quite evident that all the men, at that first meeting, were unanimously in accord with forming an association.

It was felt that this association should parallel, as closely as possible, the National Refrigeration Supply Jobbers Association. It was decided to write the national association, informing them of this intention and requesting an opinion from them. Assurance was given of hearty cooperation in our new adventure.

One of the requirements for membership is that the company making application must be a member of the National Refrigeration Supply Jobbers Association before being accepted into the New England association.

"Our By-Laws provide for three officers: a president, a secretary, and a treasurer. Meetings are held every month," Mr. Sheperdson outlined. "Since the formation of our association, there has been a decided improvement in the relation between the jobbers in our area.

CREDIT MATTER EXCHANGED

"We have had some credit interchange work which has proven most helpful. The success of the New England association is largely due to the friendship and understanding that came into existence since the formation of the association. We, as a body, have practical problems to solve, and our monthly meetings give us the benefit of joint action.

"We have inaugurated an annual outing which has been held for the past two years at the Avon Country club at Avon, Conn. To this outing, we invite the manufacturers' representatives who call on us, and any other members of the manufacturers' companies who care to come. This has proven to be a very enjoyable affair and it gives every one an opportunity to have a day of play and to become better acquainted.

"In the spring of 1939, a product show was held in Springfield. The manufacturers exhibited their products in the main ballroom of the Charles hotel. This product show lasted two days and there was an attendance of between six and seven hundred service men, dealers, and distributors. Our customers seemed very pleased and interested because the show gave them the opportunity of becoming acquainted with various lines of products.

"We feel that the New England Refrigeration Jobbers Association is a definite asset to its members and a common meeting ground for its members. We hope that it is a recognized factor in the eyes of the national association."

Jacobs & Gile Is New Oregon Jobbing Firm

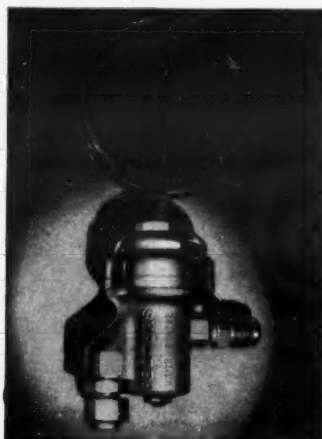
PORTLAND, Ore.—Jacobs & Gile, Inc., metal jobbing house here, has added a refrigeration parts jobbing department. The firm has also taken out a license to manufacture coils and plans to go into production on this line.

Refrigeration parts jobbing department will serve Portland and surrounding territory and parts of Washington, Idaho, and Montana. Among the lines handled by the firm are Imperial fittings, A-P products, Dayton belts, Revere tubing, Spoehrer-Lange products, Pittsburg Chemical Co. refrigerants, and Ranco controls.

E. R. Nottingham will be in charge of the new refrigeration department of the firm. He was formerly a distributor for Westinghouse in Montana, and prior to that was with Frigidaire in Portland.



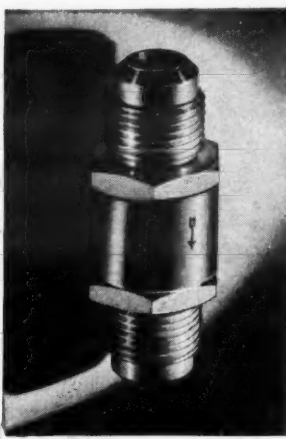
FEDDERS Model 391
Thermostatic Expansion Valve



FEDDERS Model 392 Non-Adjustable
Thermostatic Expansion Valve



FEDDERS Model 393
Automatic Expansion Valve



FEDDERS Model CV-39
Check Valve

PRESENTING FEDDERS

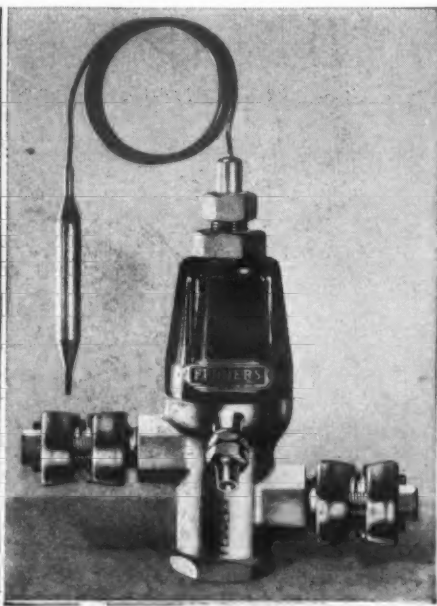
Complete

LINE OF VALVES

for Every Refrigeration and Air Conditioning Need



FEDDERS Model HCP-38 High Capacity
Constant Pressure Valve



FEDDERS Series 37 High Capacity
Thermostatic Expansion Valve



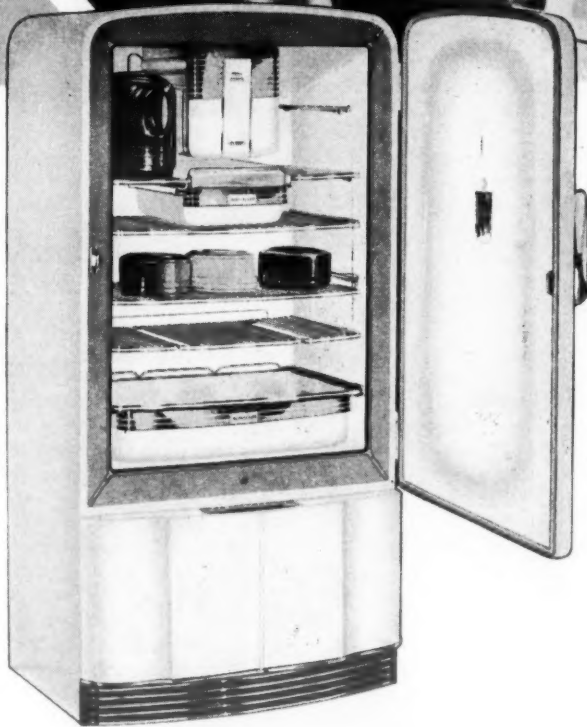
FEDDERS Model CP-40
Constant Pressure Valve

FEDDERS MANUFACTURING CO., BUFFALO, N. Y.

Every house needs
Westinghouse



**SMASH
HITS
IN
SELLING
SHOWMANSHIP**



Tru-Zone Cold, with True-Temp Control and new Fiberglas insulation, lets Westinghouse dealers in 1940 sell the SUREST, STEADIEST food protection temperature control in any household refrigerator.

DEALERS TO PROFIT

FROM BIGGEST PROGRAM IN WESTINGHOUSE HISTORY

On the air... it's "Musical Americana," the new, distinctive, and *different* radio program! Every Thursday night, over a big-time network of 96 stations, it makes new friends for Westinghouse—and Westinghouse dealers!

"The Middleton Family at the World's Fair"—big 50-minute all-color movie—shows in 2,500 theatres, 10,000 showings—making new friends for Westinghouse and Westinghouse dealers.

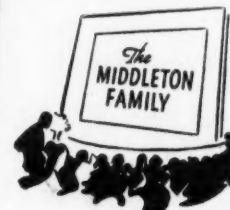
Magazines, newspapers, 24-sheet posters, all add up to a 1940 program that gives Westinghouse dealers the greatest pre-selling support they ever had. And for showroom demonstration, 1940 provides new dramatic selling helps to close sales faster for '40. If not already a Westinghouse dealer, write or wire for 1940 facts.

WESTINGHOUSE ELECTRIC & MFG. CO.
MANSFIELD, OHIO



RADIO

"Musical Americana" sets a new standard in radio programs—NBC Blue Network every Thursday, 8 p. m., Eastern Standard Time.



MOVIES

10,000 "Middleton Family" showings in full Technicolor cover 2,500 theatres. Set of 7 Technicolor Minute Movies also available for dealers.



MAGAZINES

8 national magazines carry 29 full-color advertisements; aggregate circulation more than 18,000,000.



NEWSPAPERS

Refrigerator ads scheduled and paid for by Westinghouse appear in 118 key city newspapers with total circulation more than 19,000,000.



POSTERS

New 24-sheet posting schedule covers selected trading areas; posters also available for dealer showings.



DRAMATIC SALES HELPS

New sales-closing material is more dramatic, colorful, and convincing than ever.

Westinghouse Refrigerators

"The Line of Least Resistance"

While There's Life (In Your Users) There's Hope (For Sales)

Scranton Dealer Gets 90% of His Business From a 'Live' List of Customers

SCRANTON, Pa.—Forget your users in the appliance business—but only when you bury them. That is the advice of R. W. McConnell of McConnell's Electric Center, full-line refrigeration and appliance dealer here, for 90% of this dealer's business comes from its users. Selling a full line of major and small household appliances, plus commercial refrigeration and heating equipment, every customer who buys one appliance from this dealer immediately becomes a prospect for another.

Users are kept in the continual customer category by the use of a two-fold store policy. First, this dealer selected "leader lines" in everything sold. Most of his lines he has had for many years, believing a much better selling job can be done on lines that have been proved by a long-time sales record in the territory.

Salesmen, says Mr. McConnell, can tell a convincing story on merchandise that has had the full backing of the store for a long period. Service costs, too, are minimized, he says, when the lines selected are good ones, because the service department is able to work faster and more efficiently than when lines are constantly changed.

Second feature of the plan is built around this service policy. "We never alibi on service," Mr. McConnell says, "and we'll lean over backward to have every customer fully satisfied. To this end, we let each service customer decide the

case, and answer argument with satisfaction.

"The service department is on call day or night, one man specializes on installations, and two take care of service calls on household refrigeration. Other service men take care of commercial refrigeration and heating equipment.

As the firm does service work on any make, service users bring in additional service customers as well as prospects for new equipment.

In getting new business from old accounts, 90% of the effort is in the original sale, this dealer holds. Only 10% effort is needed to sell additional merchandise if the first sale has made the user a booster, he explains. Mr. McConnell claims his long-term leader lines have actually saved money on service. "Bargain lines may mean more money at first," he says, "but excessive service eats up any extra profit on the sale. A store must have good merchandise if it aims to stand behind it."

The McConnell firm has been in business over thirty-five years, and has built up and kept its clientele by "taking care of each customer." In any business, says this dealer, a long-time reputation for fair dealing must be deserved, and this firm is constantly at work to maintain the confidence of old and new accounts.

Store salesmen stay in step with the policy, for they have found that users are their best bets. Because they are themselves convinced on all

appliances sold in the store, they can be shifted from one appliance to the other as the big season in each is reached. They may go from refrigeration to stokers, to radios, yet never lose the chance for any sale.

Salesmen in the commercial refrigeration department trade leads with the household sales department, commercial men getting 5% on a household lead, and the household salesmen getting a percentage on commercial installations.

The commercial department, now a year old, follows the same sales road of satisfactory merchandise, installations, and service. Extensive advertising is done on both equipment and servicing of equipment. The main point in commercial sales is to watch capacity, Mr. McConnell feels. If a beer cooler customer, for instance, is getting full service at low cost, he can sell more beer coolers for you. From the first job this firm put in on this policy, 14 more resulted, ranging in price from \$750 to \$3,000.

But the sales force did not stop there. Of the beer cooler customers, 50% already have bought stokers from the McConnell firm. From these, it is expected that sales in other equipment will result.

User files are not considered a hit-or-miss chance to pick up a lead, but are used as a source of "visiting cards." Each canvass of a user is a visit made to check on the user's satisfaction with the appliance in the home and with the service received.

She Knows 'The Woman's Angle'



Women would rather buy appliances from another woman, says Mrs. Grace Parker, veteran saleswoman with Scruggs-Vandervoort-Barney, St. Louis, who is shown here demonstrating a washer to prospective customers. She tells the story of the appliances' practical advantages, and sells comfort rather than mechanical equipment.

Women Buy on Practical Points, Says Lady Sales Veteran

ST. LOUIS—Can a woman stand shoulder to shoulder with men and do a good job of merchandising major appliances? Scruggs-Vandervoort-Barney, St. Louis department store, believes it can give an emphatic "yes" to that question simply by pointing to Mrs. Grace Parker, veteran appliance saleswoman who has spent 20 years on the fourth floor of the store.

During the entire length of that time, Mrs. Parker has consistently outsold every man the store has ever employed, and is now head of one of the most smoothly operated major appliance departments in the Missouri city. She sells appliances along with two men salesmen also detailed to floor activity—and 70% of her customers are women who "wouldn't buy from anybody else."

The secret of her competence? "Work" is the way Mrs. Parker herself explains it—but there is a story of careful merchandising of sound fundamentals in addition to the hours she puts into the business of pushing Vandervoort's appliances.

Mrs. Parker is convinced that women place more trust in another woman, and that practical knowledge of the appliance subject can be more easily passed along in that way. Therefore, she has constantly built toward the woman's angle, contacting her outside prospects with the idea of worksaving and easier home operation as a lead feature. Her displays, model kitchen, and everything in the Vandervoort major appliance section reflect that theme with a high degree of efficiency.

The management of the store asserts that Mrs. Parker (incidentally the only woman appliance salesmanager in the city) is a dynamo of energy—and her outside activities bear this out very well. She believes in keeping up with manufacturing trends and new appliance developments, and to do so, attends every "school" or exhibition staged by electrical appliance manufacturers, sometimes four or five in a month.

In addition to that, she handles all promotional activity in connection with the appliance department in her own home—spending a major part of each evening getting out direct-mail of carefully handwritten, personal letters, using the telephone to follow up past sales and dig out prospects, and studying manufacturer's literature.

Above that, she keeps a card on every appliance sold, and constantly rotates them so that any refrigerator or range old enough to require replacement doesn't escape her watchful eye. In view of her long service to the store, she has often sold the same family or same customer as many as six times, and can relate the appliance history of any long-time customer with ease.

Mrs. Parker is a firm believer in the efficacy of the telephone as a sales agent. Whenever a customer buys a refrigerator, Mrs. Parker notes her down as a potential range prospect in a few years—dependent of course, upon what information she can elicit from the customer in the course of conversation. Then, noting the date on which she intends to call the customer again, she places the card in the file, leaving it there until it "matures" and she can call the customer with a fair certainty of getting a good reception. Ninety per cent of her "add-on" sales are made on this "personal" basis.

Another valuable source of prospects she has developed entirely on her own comes from watching the credit or time-payment standings of her customers. Every day Mrs. Parker can be seen at Vandervoort's credit office, checking payments on appliances she has sold in the past. If one of her customers has just paid up her original major appliance contract, Mrs. Parker considers her an ideal prospect for another sale—and goes right to work. In the course of an average week, some six or seven "paid ups" appear, forming the basis for the following week's telephone and direct-mail solicitation. It's a self-pyramiding system of unquestionable worth.

Mrs. Parker believes that knowing the customer's financial status is vital to recommending the proper unit-price, and always checks on this angle with an eye toward trading up the price of ranges and refrigerators whenever possible. Her floor approach usually begins with the mention of some single mechanical feature of the appliance a customer may be examining, such as oven heat control, radio-equipped refrigerator, etc. She has won two Westinghouse dealer awards (a ring and a wrist-watch) in national sales contests, and is a member of the St. Louis Electrical Board of Trade.

IF YOU designed a refrigeration control

IT'S TEN TO ONE THAT YOU'D AIM AT THESE SIX FEATURES

EASY-TO-READ DIALS...

Whether you're a builder or installer of refrigeration equipment you want to take the guesswork out of setting a control to the desired temperature or pressure. You'd have the same kind of easy-to-read dials that are on White-Rodgers Pressure and "Hydraulic Action" Temperature controls.

UNVARYING DIFFERENTIAL...

You want to be sure that the differential will remain the same even though the setting may be adjusted to a new point. White-Rodgers control users are sure the differential will remain constant.

ACCURACY...

You want to know that once the control is set there will be no "drift" of temperature or pressure setting to change box temperatures and cause costly service calls. The dependable accuracy of White-Rodgers controls has become a byword among service men everywhere.

LONGER LIFE...

The stainless steel diaphragm used on "Hydraulic Action" temperature controls and the new, improved bellows on pressure controls require a comparatively small movement to actuate the switch mechanism. This greatly prolongs the life of the diaphragm and bellows.

EASY ADJUSTMENT...

The use determines the type of adjustment you want—a knob to provide unlimited freedom of setting—a screwdriver opening to prevent unauthorized tampering—a lever to permit adjustment only within a limited range. All these are features of White-Rodgers Pressure and "Hydraulic Action" Temperature controls.

STURDY SWITCH...

In the control you designed you'd want a switch that could stand more than normal abuse. An ordinary blow or a fall to the floor won't hurt the sturdy switch mechanism used in White-Rodgers Temperature and Pressure controls.

The Pressure and "Hydraulic Action" Temperature controls made by White-Rodgers offer you all the desirable features you would design into your own control.

The new 1940 condensed Refrigeration Control Catalog will be mailed at your request. Write for it now.



WHITE-RODGERS ELECTRIC CO.
CONTROLS FOR REFRIGERATION • HEATING • AIR CONDITIONING
1211 CASS AVE. ST. LOUIS, MO.

'Lottery Plan' Speeds Collections On Time Payment Accounts

HAMLET, N. C.—To stimulate collections on time-payment accounts, to attract customer interest, and to increase new business, Patrick Furniture Co., local major appliance dealer, recently used a variation of the old lottery scheme.

For every 50 cents paid on account, either new or old, a ticket bearing the customer's name was deposited in a box. Then every Saturday night for three consecutive weeks a drawing was held and a free radio was awarded to the person whose name was pulled out of the box. The stunt was promoted through local newspaper advertising.

City Servants Praised In Goodwill Advertisements

ANNISTON, Ala.—Members of this city's police and fire departments were featured by Anniston Electric Co., Westinghouse dealer, in a series of goodwill advertisements. Naming the public servants as "community assets," the advertisements carried photos of individual police and firemen, with a short biography of each of them.

Copy called attention to the part played by electrical appliances and equipment in making home life more comfortable and secure, and offered the company's aid on needs in the electrical field.

Here's the Finance Plan for YOU..

Here's WHY



FIRST in importance to you, in any finance plan you work with this year, is the question:

*"Will the plan attract the buyer—
and still assure my full profit?"*

There's no use your making sales if you don't pocket a profit out of them. And it's hard to make—and *hold*—a profit if the customers' rate is made low at *your* expense.

So Commercial Credit Companies bring you the new DEALER RESERVE Plan, in which the first consideration is the protection of your merchandise profits.

It boils down to this:

A large part of your 1940 sales will be time payment sales. On a certain percentage of these sales, you may have to make repossessions.

After you get through paying the repossessing, reconditioning and re-selling expenses, you can seldom realize enough to show a profit—frequently you take a loss on such sales.

Most repossessions will occur in the first six months. A plan that doesn't give you protection during this crucial period lets you down. It doesn't do any good to lock the barn *after* the horse is stolen.

Commercial Credit Dealer Reserve Plan protection starts the day you make the sale, with a cash reserve set aside for you which runs as high as \$5.40 a deal.

There's the meat of it—*Profit Protection*—point number one, in *your* favor.

Do you think this protection forces higher rates to your customers? On the contrary. On this, and on all other Commercial Credit plans available to you, rates have been substantially reduced. That's point number two—and it's also in *your* favor.

Among the other plans referred to are the Limited Liability Plan—popular with many dealers—as well as the Purchaser Discount Plan—created to reward prompt paying purchasers.

Commercial Credit plans are backed by a liberal, highly efficient credit and collection service, and require but a single, simplified rate chart. Special plans are available for short-term financing; for quarterly payments by farmers; for combination and "add-on" sales; and a liberal, low-cost FHA plan for financing eligible equipment.

These are the high spots. Talk to your local Commercial Credit representative, and let him fill in the interesting details. It will be decidedly to your advantage.

* * * *

Commercial Credit Companies offer a Floor Display Plan for financing a single unit or an entire display of new merchandise. Terms are liberal, and the charges extremely low. Dealers may also arrange to demonstrate this merchandise in the prospect's home. Ask your local office for full details.

COMMERCIAL CREDIT COMPANIES



LOOK AHEAD

SIX WEEKS AGO, Leonard made the most important announcement in its history.

Climaxing 59 years of quality building, we presented the finest Leonards ever built. And we priced these Leonards at reductions of over \$60, compared with last year.

And today...even before the heavy selling has begun...we believe that 1940 *will be the biggest year in Leonard's history.*

The reason for this is plain. LEONARD'S PRODUCT AND POLICY FOR 1940 ARE DESIGNED TO MEET THE THREE GREAT PROBLEMS OF THE REFRIGERATOR DEALER.

1. Leonard enables you to meet low-price competition with a high-quality product. Leonard's price reductions range up to \$60. Not only a "low-price leader" but reductions on every model in the line so that you can compete in every price-bracket!

2. The new, exclusive Hi-Humid Food-Fresh-

LEONARD

WITH LEONARD!

ener System that keeps moisture in food in every part of the cabinet is real news to women. In this feature Leonard gives you something new to sell to the profitable and fast-growing replacement market.

3. With Leonard's low prices there's no need to sacrifice 10% to 20% of your gross to meet competition.

Every one of the big new Leonards has the finest cabinet money can buy. Every one is powered by the famed Glacier-Sealed Unit...that has set a record for quietness and service-free performance. Every one is *new*...a 1940 product. And every one offers features and conveniences never before obtainable at the same price.

Just look at the big Leonard pictured below...and you'll get the idea.

Already, Leonard dealers in every part of the country have responded enthusiastically to this 1940 program.

Recent changes in Leonard's policy have created an unusual opportunity in a number of towns. Many dealers can now get in on an exceptional proposition. If interested, see your local Leonard distributor or factory branch, or communicate direct with Sales Manager, Leonard Division, Nash-Kelvinator Corporation, Detroit, Mich.

*Prices suggested are for delivery in the kitchen with 5 Year Protection Plan. State and local taxes are extra. Prices are slightly higher west of the Rockies



1940 LEONARD GIVES YOU ALL THIS

Fine Permalain cabinet finish • Porcelain-on-steel cabinet lining • Full 6¼ cubic-foot size • 11½ square feet of roomy shelving • 84 big ice cubes — 9 lbs. • Embossed Freezer Door • Silent Glacier sealed unit—requires no oiling • Automatic light • Len-A-Latch Door Handle • 5 Year Protection Plan • Price

\$119⁹⁵*

ELECTRIC

AIR CONDITIONING & REFRIGERATION NEWS

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The 'Price War' & Its Effects

DEALERS in many parts of the country are reported to be in a state of bewilderment over the rapid series of changes in the retail price schedules on household refrigerators which have come in the last few weeks. Where will it all end? Will they be able to make any money this year? Are they safe in making their commitments for 1940 floor stock now?

To the last question, the answer is "yes." To the next-to-last question, the answer is: "Depends on your volume—and at those prices, your volume should certainly be better than it was in 1939."

And for the first question, the answer—straight from the feed box—is that the "war" has already ended. No further drastic cuts are contemplated by any of the major manufacturers this season.

No More Big Price Reductions Contemplated By Nema Group

Of course one can never be too sure of anything in this business, but the inside information is that "the big shots" are already groaning over the price reductions they made in January, and are certainly in no mood to give away any more of their margins.

Sears is advertising \$88 and \$100 specials (1939 models) in some cities, but then Sears has sold "specials" at those prices before. Nobody expects Sears to be able to get much below those figures—and even if Sears does slice its prices some, it should have no effect on the price structure of other manufacturers.

Big Increase In Volume Needed To Insure Profits

However, if Frigidaire should trim prices again, that would be another story. Frigidaire pretty much sets the prices for the industry.

Several manufacturers—as well as a great many distributors and dealers—feel pretty blue about the situation. "Millions of dollars have been taken out of the industry just by a few strokes of the pen," is the way they put it.

On the other hand, there are defenders of these moves who foresee such an increase in volume that everybody concerned should make very good money indeed out of the household refrigeration business in 1940.

Dealers Expect To Gain At Expense of Others

Where will this volume come from, and why? Well, here are some suggestions:

(1) *At the expense of the chain stores.* Last year the chain stores (Sears-Roebuck, Montgomery Ward, and the auto-supply chains) are estimated to have sold close to 500,000 household refrigerators. Their retail prices were from \$30 to \$60 under those of their rivals. This season that spread has been cut at least in half. Hence other manufacturers figure to cut heavily into the enormous volume the chains have been getting.

(2) *At the expense of the gas utilities.* Another potent factor in household refrigeration is the gas refrigerator (Electrolux). Sold largely through gas utilities, its national volume has been running over 200,000 units annually for years. Their prices have been competitive; they are not now. Here is another big chunk of business that can be cut into by dealers in nationally advertised electric refrigerators.

(3) *At the expense of the ice companies.* The handsome ice refrigerators which have been aggressively merchandised by ice companies in many localities have been selling at prices ranging from \$65 to \$100. Again, the spread between these refrigerators and the electrics has been sharply reduced. When you add the cost of a year's supply of ice to the original price, you get a figure which stands right up alongside that of the new 6-foot electric refrigerator specials.

Higher Saturation Means Lower-Income Market

(4) *From low-income families.* The higher the saturation point, the lower the incomes of the families remaining unsold. These new much-lower prices are going to make a big hit with families that have to watch their dimes and quarters.

(5) *From present owners.* Those who have refrigerators which have been in use several years, and have been considering replacing them but haven't quite made up their minds, may be "pushed over" by these new prices. Without doubt, the new retail lists are causing "talk" among consumers—particularly since price trends on so many other products have been upward, rather than downward.

In Position To Capitalize On Business Upgrade

All-in-all, it looks as if there are a great many reasons for believing that the volume of electric refrigerators sold through distributor-dealer channels this season is due for a handsome increase. General business conditions are excellent, and the competitive position of the "national" electric refrigerators is better than it has been in many years. The inventory situation is good, too.

True, dealers will have to sell more to make as much. But refrigerators should be easier to sell at these prices. It should be

They'll Do It Every Time . . . By Jimmie Hatlo



remembered that the refrigerator must compete against all sorts of other expenditures, as well as against other refrigerators—a new car, new clothes, vacation trips, a radio-phonograph or television set, camera equipment, home furnishings—the list goes on and on.

The struggle for the consumer's dollar gets more intense each year, and to keep in the thick of the fight one must continually offer the consumer more for his money—either through improved quality, more attractive or more useful designing, or lower prices.

QUOTED

Typical Consumer

An Editorial in
Printers' Ink

Once upon a time there was a woman named Grace. She was an Influential Member of Her Community.

Her husband was a Good Fellow, and gave Grace lots of money to spend. Because she had lots of money to spend she loved to go shopping.

She shopped, of course, only at the best stores in the high-rent districts. She preferred the shops which had the most modern equipment. Because she admired Enterprise on the part of local merchants, she was always pleased when a shop added new equipment, or redecorated, or installed new escalators and things.

She was proud of the fact that she was just a Simple Home Person. "I'm not fussy," she used to say. "I like to treat clerks just as though they were like other people. But it does seem to me sometimes that the local shops don't have enough clerks. Why, last week I had to wait two or three minutes before I was served."

Conscious of her obligation to the Community, Grace had charge accounts at many stores. She found them convenient. She didn't always pay her bills when they were due but, as she remarked, "What difference does that make, really? The storekeepers have plenty of money and I guess they don't care an awful lot if I don't pay my bills for sixty or ninety days. Anyway, I charge loads of stuff and they are so very nice about it."

Grace always had her purchases delivered. "It's so convenient," she said. "You know how messy little packages are, and the shop keepers are so accommodating. Why just the other day Goldman's delivered a tube of toothpaste clear out to our home at Rosebud Heights."

Because Grace was a careful shopper she often found it difficult to make up her mind. But the store owners were very nice about that, too. They used to send things to her home so she could look at them and

send back the things that she didn't want.

One time, when Grace was giving a particularly large dinner, she ordered a complete set of tableware from Smith & Jones and then, after she had used it, sent it back the next morning. Smith & Jones were nice about that, too. They never said a word, although Mr. Smith read about the party in the Society Column.

It was a few days after the party that she met Mr. Smith at a dance at the Country Club. She was awfully pleased when he told her that she was a Typical Customer.

Maybe that's why Grace was appointed Chairman of an Important Committee at her Women's Club. It was called the Committee on the High Cost of Distribution.

All of the members took their work very seriously. Just before the end of the club year they sent a form letter to every storekeeper in town. In the letter they told the merchants that prices were too high and that if the merchants didn't do something about it pretty soon, the women would be quite mad.

LETTERS

For Answer: See Editorial On This Page

Clark-Bracken, Inc.
Westinghouse Appliances
120 Fifth Ave. S.
La Crosse, Wis.

Editor:

Knowing that the News has more or less looked after the interests of the refrigeration industry for some years, and has done a very good job, too, we are writing on a very important matter.

If it isn't asking too much the writer feels that NOW is a good time to get something into your weekly on the matter of the "Late war" not across the water but right here in our own yards of the refrigeration picture, and a fine one it will prove unless the group get together far closer than they have the past few weeks.

If Nema ever meant anything it was a good place to try it out recently when the boys all started to play checkers with the 1940 price lists that they have just about got cooled off the printing press when they get out a new one, cheaper.

Is there any need for all this price cutting and carrying on that is going on among the factories right now? Just because one national company wanted to lower the prices was it necessary for the rest to get down, too? . . . make this business less profitable than ever . . . and it can stand some more . . . not less.

There never was anything made as we all know but what could be made cheaper and worse . . . and we have never looked at the appliance business as just something to sell cheaper but always to sell the "idea."

Every person that buys a good refrigerator gets far more than just dollar investment—they get a long time of pleasure—and the prices, we feel, do not need to be brought down and down at this time to sell them

. . . that has been proven by the sales of last year.

I would appreciate your comments to this, George, and if you have time to give us your idea and picture of what's going to happen if this price thing keeps up.

G. B. BRACKEN

Air Mail Postage Would Cost \$18.00

Shirar Young Refrigeration Corp.
Frigidaire Authorized Dealer
1450 Van Ness Ave., Corner Pine
San Francisco, Calif.
Feb. 1, 1940

Sirs:

On page 44 of your issue of Jan. 10, you make a special combination offer of any two books illustrated on that page free with a full year's subscription at \$4.00, if this amount is paid in advance.

Enclosed please find our check for \$4.00; however, instead of the two books, we would prefer that this subscription be sent to us air mail. It has been our past experience that these copies reach us considerably late, and we feel that if they came forward air mail, this condition would be corrected.

We desire very much to subscribe and hope that you will forward the subscription air mail instead of permitting us to select the two books referred to in your special combination offer.

H. D. EDDY

Answer: We are sorry but we cannot substitute air mail postage for the premiums offered with a subscription. We wish to explain that the air mail postage on a one-year subscription to the News (52 issues) would amount to about \$18.00. This air mail postage for each issue would be approximately 36 cents (each issue weighs approximately six ounces and air mail rates are six cents per ounce).

They Might Try This In Some of Those Govt. Installations

COPY

Westinghouse Electric & Mfg. Co.
20 N. Wacker Drive
Chicago, Ill.

Mr. Maurice Peiner
Natkin & Co.
1729 Howard St.
Omaha, Neb.

Subject: New Uses for Air Conditioning

Dear Maurice:

Thanks for your Feb. 3 letter, calling my attention to the article on Page 1 of the Jan. 31 AIR CONDITIONING & REFRIGERATION NEWS.

I saw this Hovland-Swanson store installation when it was started up and knew it was going to do great things. It is a fine Westinghouse installation, thanks to Natkin & Co., but it seemed to be doing more than I expected of it.

We shall have to add this idea of selling perfume by means of samples in the air conditioning system, to our list of the profit possibilities of air conditioning. I suppose next you will be trying it out in the Omaha Stock Yards District?

E. N. BOWLES,

Air Conditioning Supervisor
CC: George F. Taubeneck, Editor,
AIR CONDITIONING & REFRIGERATION NEWS.

'There's Gold In Them Thar Contests'

N. J. Utility Awards Cash To Kelvinator & Thor Salesmen

NEWARK, N. J.—Awards for distinctive records in Kelvinator refrigerator and Thor washer sales contests during the past year were presented to 150 electrical appliance sales representatives and supervisors of Public Service Electric & Gas Co. at a recent luncheon meeting in the Robert Treat hotel. Presentations were made by Ernest L. Fleming, general sales manager of the utility.

Distribution of the awards was preceded by a display of the 1940 Kelvinator refrigerator models in the auditorium of the Newark Terminal building. New models were presented by F. R. Pierce, Kelvinator general sales manager, and K. L. Saunders, zone manager.

Percy S. Young, chairman of the utility's executive committee; Henry P. J. Steinmetz, vice president in charge of sales; and Charles A. Stevens, sales manager of the electric division, spoke at the meeting.

Recipients of the cash awards were: NEWARK—Carlton Brown, Milton Cohn, D. G. Cutler, C. C. Daly, L. F. Durand, R. W. Finger, David Grossman, F. J. Knowles, B. J. McGarry, T. D. Miles, B. H. Moore, N. A. Richardella, William Rufolo, A. L. Shaw, Louis Sorin, P. V. Triano, F. H. VanVersen, John Wallace, S. H. Walters, Harry Ashin, G. A. Burdett, Samuel Cooper, A. J. Feuling, Charles Jelinek, M. H. Johnston, H. M. Richardson, George Hoover, Lambert Thompson, S. B. Straus, R. E. Finn. ORANGE—T. R. Hunt, H. A. Lockwood, John de Kay, M. A. Mantell. MONTCLAIR—A. A. Aulen, Louis Bansemer, E. M. Hopkins, J. W. Francisco. JERSEY CITY—George Bollenbach, G. L. Carfora, J. W. Dauenhauer, T. J. Feneis, Leon Newcomb, L. J. Carfora, L. J. Rooney, John Vanderstar, H. M. Culver, S. Gersten, Nicholas LaRaia, I. E. Levin, J. W. MacLean, Charles Truckseess, C. E. Everett, H. N. Jagger.

HOBOKEN—Maurice Patane. NORTH HUDSON—George Howard, E. J. Mischio, E. H. Barison, V. J. Gallagher, Louis Harrell, William Schweigert, J. F. Trucksees, Philip Wolowitz, M. E. Schwartz. BAYONNE—J. D. Terpening, D. J. Hussey, A. E. Rapp. PATERSON—Frank McGraw, J. W. Johnson, J. A. Nicoll, A. P. Person, Jack Weinberg, A. A. Young, C. E. Stryker. PASSAIC—P. J. Brauchler, G. H. Locker, B. W. Sargent, S. P. Vidale, A. I. Feivov, George Wild, Frank Zabriskie.

HACKENSACK—R. P. Nelsen, W. E. Nowakowski, P. J. Ferrara, F. W. Fitzmaurice, E. H. Moore, R. K. Morse, L. T. Rege, J. P. Flannigan. RUTHERFORD—M. A. Scheinberg, Marinus Heyboer, J. A. Stollar. ENGLEWOOD—L. P. Donovan, J. N. Kerr, W. L. Muenzen, A. L. Newton. ELIZABETH—C. P. Allen, C. A. Canfield, Lipman Duckat, E. J. Gamm, Otto Gralla, F. D. Lesin, M. A. Tansey, J. H. Walker, J. B. Hughes, H. S. Londa, Thomas Nelson, S. B. Starkweather, I. J. McCormick. PLAINFIELD—A. E. Caswell, Robert Pauley, W. L. Ruyon, J. G. von Felitzsch, H. R. Cook. BOUND BROOK—W. B. Bardbury. SOMERVILLE—Grover Williams.

RAHWAY—J. W. Burden, Laurence Marciano, J. J. Compton, H. J. Hodge. NEW BRUNSWICK—Albert Christoffer, J. E. Clayton, M. J. Hummel, R. W. Tews, E. J. Hayes, C. B. Tornow, W. A. Nelson. PERTH AMBOY—S. A. Johnson, H. R. Macnab, C. O. Pelzel, H. F. Slater, John Strachan. CAMDEN—C. C. DiBlasio, C. M. Kasprzak, C. A. Lenny, E. A. Smith, J. H. Wood, Gerald Tobin, C. B. Troncone, Emil Valiant, W. H. Zaun, W. H. Brooks. TRENTON—George Bitzer, E. M. Carpenter, Thomas Holden, Mrs. Marie Silsby. PRINCETON—E. R. Thomas, L. G. Simonson. BURLINGTON—E. N. Weidman, A. R. Murphy, S. W. Wojack.

New S-W Distributor In Houston

HOUSTON, Tex.—Forston Distributing Co., recently appointed distributor for the Stewart-Warner line, was host to dealers of the Houston area at a showing of 1940 model refrigerators. The firm, which has headquarters at 422 Washington Ave., is headed by C. E. Forston.

Kosher Heads Appliance Dept. At J. C. Penney Omaha Store

OMAHA, Neb.—Paul Kosher has been appointed manager of the small appliance department at J. C. Penney Co. here.

MKB Announces Winners In Water Heater Display Contest

NEW YORK CITY—First honors and a cash award of \$100 in Modern Kitchen Bureau's 1939 electric water heater window display contest was won by Coshocton, Ohio office of the Ohio Power Co. for a display designed by Harry F. Strong and Ernest Vogt. Second prize went to Kansas Power & Light Co., Hutchinson, Kan., whose display was designed by Andy Hess.

Ten other awards of \$10 each went to Minnesota Power & Light Co., Duluth, Minn.; Ohio Power Co., Portsmouth, Ohio; Nebraska Power Co., Omaha, Neb.; Kansas Gas & Electric Co., Wichita, Kan.; Wallick's, Los Angeles; Philadelphia Electric Co., Philadelphia; Tampa Electric Co., Tampa, Fla.; Gulf States Utilities Co., Beaumont, Tex.; Ohio Edison Co., Youngstown, Ohio; and Northwestern Electric Co., Portland, Ore.

The Coshocton prize-winning window featured a shower bath with running water and steam, using a pump to provide continuous circulation of water from the base of the shower through the heater and out through the spray head. The Hutchinson window provided a comparison between the old and new systems of water heating.

Judges of the contest were Samuel Blum, display director of Gimbel Bros., New York City; Bernard B. Green of Ivel Corp., display specialists; and John Clifton, New York illustrator and designer.

A similar contest was announced by MKB for 1940. Any water heater window displayed between Feb. 1 and May 30 is eligible.

Powell Appointed Graybar Manager In New England

BOSTON—Charles S. Powell has been appointed New England district manager of Graybar Electric Co., electrical appliance distributor. He will headquarter in Boston and will direct operations in Providence, R. I., Worcester, Mass., and Springfield, Mass. branches.

Mr. Powell has had 25 years' experience with Western Electric Co. and Graybar, and was most recently Graybar's sales manager for telephones in the New York area.

Dallas Dealers To Hold Refrigeration Conference


DALLAS, Tex.—Initial plans have been made for an electric refrigeration sales conference to be held some time in March for Dallas dealers and their sales forces.

Meetings will present a critical analysis of prospects for the year, and will give suggestions regarding trade-ins and used refrigerator sales. Manufacturers' promotional programs for the year will be outlined, and the cooperative plans of Dallas Power & Light Co. will be explained.

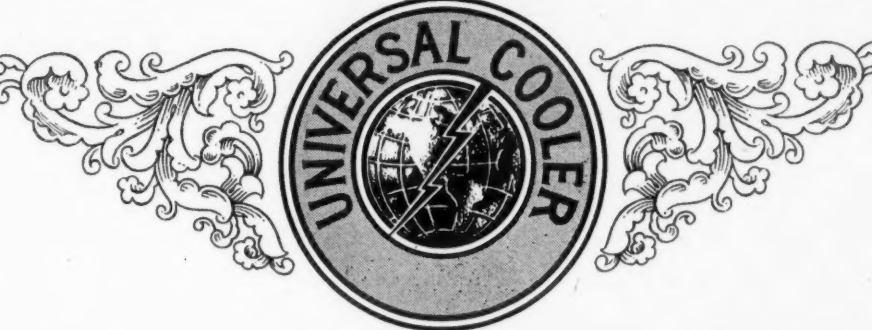
Birmingham Distributor Shows 1940 Norge Line To Dealers

BIRMINGHAM, Ala.—The Birmingham Electric Battery Co. demonstrated the new 1940 line of Norge appliances at a meeting of Alabama and West Florida dealers here Jan. 8. E. D. Henley, president, and Bill Ewing, sales manager, arranged the meeting.

New models were presented by James A. Sterling, merchandise manager, and Walter M. Davis, district manager, of Norge.



THIS IS THE COAT OF ARMS OF BENJAMIN FRANKLIN
The Symbol of a Bearer of Universal Logic



THIS IS THE SYMBOL OF UNIVERSAL COOLER CORP.
Who Still Practice Common Sense In Business

It is our sincere determination to follow a course of business practice that will best benefit our customers. As suppliers of condensing units, leading manufacturers rely on us to maintain the highest standards of their name and product. Our engineers are available to cooperate in solving any refrigeration problem. Correspondence is invited!

UNIVERSAL COOLER CORP.
DETROIT, MICHIGAN
In Canada: Universal Cooler Co. of Canada, Ltd., Brantford, Ontario

McGranahan Co. Named Norge Distributor

TOLEDO—V. J. McGranahan Distributing Co. here has been appointed distributor for Norge products in 21 counties of northwestern Ohio. The company is also distributor for Zenith radios.

V. J. McGranahan is president of the distributorship; Carl W. Moellenberg is secretary-treasurer; and Clark White is service manager, heading up a staff of five specializing in Norge service. The firm's out-city territory will be covered by H. H. Carpenter, O. V. Yarnell, and I. C. Simpson, while Gordon Campbell, affiliated for some time with Norge in Ohio, will serve as special representative. N. H. Cook and Daniel Mestaeller will handle the metropolitan market.

Washington Refrigeration New Gibson Distributor

WASHINGTON, D. C.—Washington Refrigeration Co. has been appointed distributor of Gibson electric refrigerators and ranges in District of Columbia, seven counties in southern Maryland, and a number of counties in northern Virginia.

The company, which for some years has been handling York commercial refrigeration and air conditioning products, also has taken on the Farnsworth radio line. N. L. Krewer is sales manager in charge of the Gibson and Farnsworth activities.

Detroit Department Store Stimulates Appliance Sales With Month-Long Housewares Show

DETROIT—The entire tenth floor of the J. L. Hudson department store here was the theater for the eighth annual "Housewares Exposition" during three weeks in January, and good-sized crowds viewed the more than 150 exhibits of things new and useful for the modern home.

Among the featured exhibits were major appliances, model kitchens, and a wide variety of small electrical appliances. Special demonstrations of electric refrigerators, washers, and ironers drew wide interest at the show. In addition there were puppet shows, glass blowing demonstrations, and pottery making to add entertainment to the educational value of the exposition. Factory experts were on hand to explain the use of the different products, and to give an "inside" view of manufacturing processes.

APPLIANCE SHOWS

A display by Detroit Edison Co. played up small appliances and highlighted the low cost of operation for a variety of electrical table appliances. A General Electric refrigerator suspended by its door to demonstrate its all-steel cabinet construction was in the exhibit of General Electric Supply Corp., Detroit distributor.

One of the most popular exhibits was a bicycle ride to show the number of watts of electricity generated, and a comparison to the amount of wattage needed to operate


different electrical appliances. Frigidaire had a special showing of its 1940 line, and there was also a special demonstration of "Freon" refrigerant by General Motors Research Laboratories. The 1940 line of Kelvinator refrigerators were shown during the exhibition.

COOKING FEATURES

The Home Advisory Bureau at Hudson's, under the direction of Mrs. Jessica Meek, had a special program of cooking classes and demonstrations by outstanding specialists in food preparation. Robert Traynor of Vita-Mineral Cooker Co., Paul Naef of Detroit Yacht Club, Joseph Fausonne, executive chef of the Detroit Statler, who gave an exhibition of cake decoration, Herman Breithaupt of Munger School in Detroit, and Tony Santiago of the Book-Cadillac hotel, Detroit, were among the featured kitchen artists.

Special attraction of the cooking schools was the appearance of nine-year-old Barbara Jenkins, Denver, Colorado's youthful culinary wonder.


A big feature of the electrical department was the three new model kitchens and a model breakfast room, showing a snack counter, kitchen work-planning nook, and a breakfast room with a fireplace. The kitchens were furnished with the latest models of all electrical kitchen appliances and were reported to have drawn high interest during the housewares show.



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The Preferred METHYL CHLORIDE for Service Work

SERVICE MEN profit
through du Pont's Research
and Technical Assistance

Prompt Shipments Coast-to-Coast Distribution



E. I. DU PONT DE NEMOURS & CO. (INC.)
The R. & H. Chemicals Dept.
Wilmington, Delaware

District Sales Offices: Baltimore, Boston, Charlotte, Chicago, Cleveland, Kansas City, Newark, New York, Philadelphia, Pittsburgh, San Francisco

Gas Industry Will Establish 'Agency' For Promotion of Commercial Air Conditioning

NEW YORK CITY—Establishment of a national gas-industry "agency" for the purpose of coordinating the activities of all interested gas companies and every responsible manufacturer of gas-using air-conditioning equipment has been proposed by the Commercial Air Conditioning Committee of the American Gas Association in its annual report for 1939.

"Air conditioning today," according to the committee, "has become accepted to the point where the purchaser is interested in buying results at a reasonable cost without caring to, or being able to, inquire into the methods used to obtain them. . . . The 60 or 80 million dollars' worth of annual business currently being done by the entire air-conditioning industry is possible not only because the several recognized manufacturers (competitive) have large and efficient sales and engineering organizations handling large contract work on a direct basis, but primarily because these manufacturers obtain distribution through at least 1,500 retail engineering-contracting concerns."

"If the gas industry is to obtain its share of the air-conditioning business, it must either develop a distribution organization capable of competing with this aforementioned one, or else must see that gas products are placed in the hands of existing engineering-contractor organizations for sale by them."

The first step toward obtaining acceptance for gas-fired air-conditioning equipment should be "an organized campaign of engineering education addressed to the air-conditioning industry by the gas industry," the committee recommends. It is contemplated that this campaign will be executed by the "agency" recommended by the committee.

The committee, which is headed by Charles R. Bellamy of New York City, recommends the six following points of action:

1. Through this "agency," distribute unbiased and current factual data on: available equipment and methods; present and potential markets; factors which influence choice of equipment and methods; proven promotional and/or selling plans.

2. Through "within-the-industry" propaganda and general educational activity, sell (by personal contact) the more aggressive gas companies on the absolute importance of assigning one or more qualified men to the full-time job of emulating locally what the "agency" is doing nationally.

3. With this newly acquired individual gas company effort properly guided within the industry, comprehensive local surveys (as the first step) can be made upon which to base the need, extent, and direction of local promotion. With but few

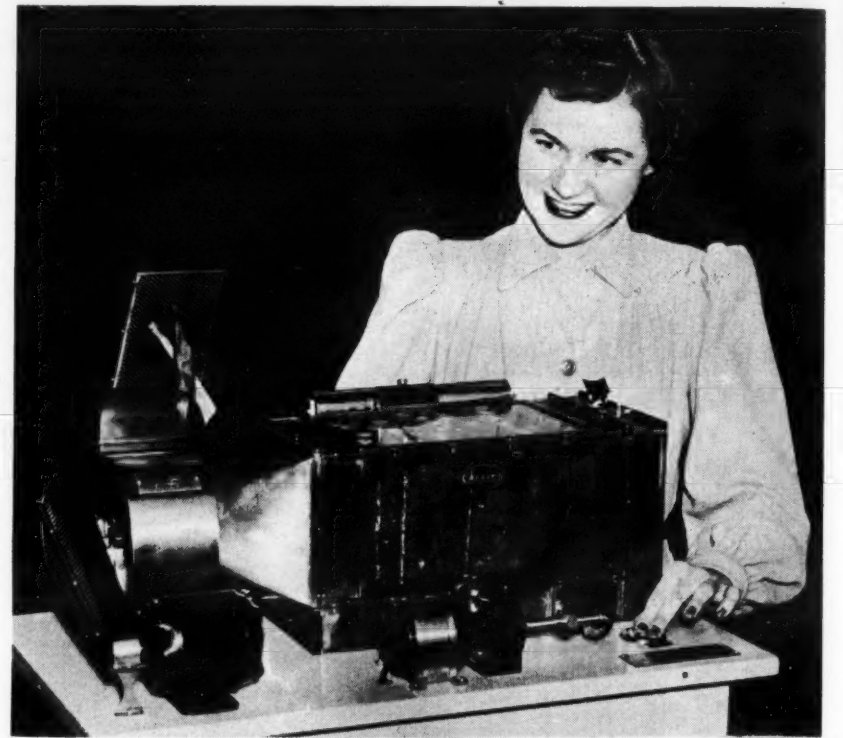
exceptions, gas utilities have no conception of what is involved in actually getting into the summer air-conditioning picture, the committee says.

4. Where justified by territorial surveys as to potential markets for gas air conditioning, every gas utility concerned should air condition its sales offices. "The gas industry must take its own medicine before it can successfully prescribe for its customers," the report states. "There has been much talk along these lines—but very little action."

5. The choice of equipment and/or method for these "demonstration" installations should be typical of the needs for the territory involved—after giving full consideration to comparative costs of utility service, availability and temperature of water supply, and local climatic conditions. A practical knowledge of these influencing factors places the utility air-conditioning engineer in excellent position to act as an unbiased consultant, the committee believes.

6. The choice as to type of organization employed to engineer and install gas company air-conditioning jobs should be predicated upon local as well as national reputation, together with the facilities that can be offered to carry on a continuing selling, engineering, contracting, and servicing program in cooperation with the local utility.

'Doll' Starts 'Doll House' System



Dorothy Streitz pushes button to start "doll house" air conditioner which is a miniature of the Carrier system serving the National Broadcasting Co. offices in Radio City. Designed by David Hillegas, Carrier machinist, the model is complete in every detail, with water sprays, motors, fans, outlets, filters, and other parts.

Lincoln Gets 51 Jobs In '39 For \$218,000

LINCOLN, Neb.—Fifty-one air-conditioning systems with a capacity of 373 tons of refrigeration were installed in this city during 1939, city reports show. Cost of pipe, connections, and labor was reported as \$18,650, while the cost of the air-conditioning equipment was estimated at \$200,000.

Eight of the units installed discharged into the sanitary sewers at a rate of 38.5 gallons per minute; 20 discharged into storm sewers at 397 gallons per minute; and 23 onto lawns at the rate of 128.5 gallons. Total discharge per minute was 584 gallons.

Rockefeller Center Equipment Reaches Total of 5,800 Tons; U. S. Rubber Building Cooled

NEW YORK CITY—Air conditioning equipment for Rockefeller Center is now being extended to serve the United States Rubber Co.'s building in the Center's south block. Two Carrier centrifugal compressors, having a combined capacity of 1,800 tons of cooling, will be installed before April 15, raising the total refrigeration in use to 5,800 tons.

Air conditioned sections of Rockefeller Center now include the National Broadcasting Co. studios, the Radio City Music Hall, the Center Theater, the British Empire Building, La Maison Francaise, and large portions of other buildings.

Delco Names New Regional Managers and Zone Heads

ROCHESTER, N. Y.—Two new regional managers have been appointed by Delco-Heat to provide closer cooperation with distributors and dealers in the field.

Georges Faurie will act as regional manager of the eastern region, which includes the Atlantic seaboard; C. J. Linxweiler will handle the midwest and central southern states.

New zone managers, operating in the two regions, are Lawrence Williams, A. H. Mann, Ray Doneley, W. R. McIver, S. P. Soluri, and John E. Saum.

Upper Floor Mounting Saves Valuable Space

TEXARKANA, Tex.—Air conditioning equipment, including a 75-ton compressor, was installed on the second floor of the modernized J. J. Newberry Co. store here to save valuable basement floor space. This is one of the first installations of the new Westinghouse 16-cylinder hermetically sealed compressor.

The entire first floor of the two story building is air conditioned. The system was designed by H. H. Pease, consulting engineer and installed by the Pines Natkin Co. of Dallas.

The machine room is above the sales floor in an unused portion of the second story warehouse. In it is the 75-hp. compressor, automatic reduced voltage starter, the air conditioning unit with 7½-hp. blower, and the main control board. An evaporative condenser is located on the roof, directly above.

The air conditioning unit consists of a built-up heavy gauge sheet metal casing, and houses the 30.8 sq. ft. evaporator coil and 25 standard throw-away filters. The casing has a cross-section measuring 9 ft. x 9 ft. and is provided with two walk-in access doors.

Condensate from the evaporator coil is carried away by an insulated copper drip pan. Provisions have been made in the air conditioner for the future installation of a steam heating coil. The entire unit is insulated with 1 inch cork finished with asbestos cement.

The compressor is mounted on a 12-inch concrete block and isolated by specially designed rubber pads. The concrete block is isolated from the machine room floor by 2-inch machinery cork. The blower is mounted on a 6-inch concrete block and isolated by six rubber dampers. The evaporative condenser is supported by two 10-inch I-beams which span the parapet wall on the roof.

The compressor, evaporative condenser, coil, line strainer, receiver, and sight glass are connected by Type K copper pipe. The low side is connected to the compressor by a 4-inch insulated copper suction line. The entire installation is under automatic control, including automatic protective devices.

All moving parts of the compressor are hermetically sealed.

AT THE '39 CHICAGO SHOW
IT WAS DETROIT No. 450 CONTROLS

NOW IN '40 IT IS
DETROIT DURAfram EXPANSION VALVES

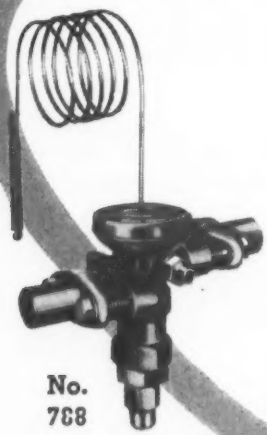
(Single Diaphragm Construction)

plus
GAS
CHARGING

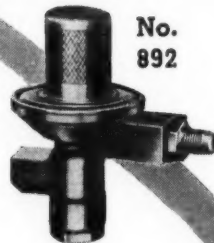
In the Durafram Valve all the advantages of gas charging (quicker balancing, faster response and elimination of motor overload) are combined with single diaphragm construction.

Because the Durafram Valve body is always at approximately the temperature of the high side liquid and always warmer than the feeler bulb, it may be used on all types of installations—even where the valve must be located in the cooled space.

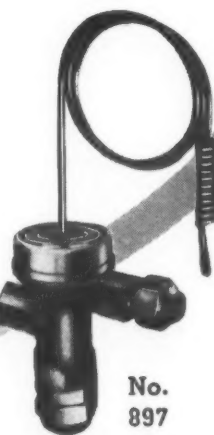
If you didn't see these new valves in Chicago, write for Bulletin 190.



No. 768



No. 892



No. 897



No. 450

The Detroit all-metal 450 Controls (full line voltage rating) include both temperature and pressure instruments for all types of commercial refrigeration and air conditioning installations. Important features are moisture proof snap switch, high pressure cut-out, high pressure cut-in, external cold control and simplified range and differential adjustments. Write for Bulletin 181.

DETROIT LUBRICATOR COMPANY

General Offices: DETROIT, MICHIGAN

Canadian Representatives—RAILWAY AND ENGINEERING SPECIALTIES LIMITED, Montreal, Toronto, Winnipeg

Pleasantaire

FINEST NAME IN AIR CONDITIONING
MOST VALUABLE FRANCHISE
in PACKAGED AIR CONDITIONING

Pleasantaire Corporation, Tower Bldg., Washington, D. C.

Controlled Atmosphere Aids Preparation Of Fruits, Beverages, and Foods

CHICAGO—Importance of air conditioning in the processing and production of products as widely separated as cigarettes and cookies, beer and bananas, was outlined to members of American Society of Refrigerating Engineers by Harry Boyd Matzen, New York City consulting mechanical engineer.

"There is scarcely a food or article which we are accustomed to consume or use today that does not in some way depend upon air conditioning or refrigeration in finding its way to our table or service," he said.

He declared that there have been between 300 and 500 applications of air conditioning for foods and industrial processes.

Problems involved in such applications, he asserted, are far more complex than those concerned with "comfort" air conditioning, since each product presents problems peculiar to itself. To develop methods to meet these problems, he said, the air-conditioning engineer must attain a close acquaintance with that particular industry, in addition to being thoroughly familiar with his own art.

Functions of air conditioning as applied to foods and industry, Mr. Matzen declared, involve the control of: 1. physical properties; 2. chemical properties; 3. biological properties.

"As an example," he continued, "not long ago bananas were considered a luxury, only available to the wealthy at certain seasons of the year. Today they are a cheap food, available at any season, anywhere in this country."

Banana Ripening Work

"In a far-off tropical country, a bunch of full grown but unripened bananas is cut from a tree, immediately precooled and then placed in the hold of a ship. Here it is kept under definite temperature, relative humidity, air circulation, and air purity control, to retard ripening before it reaches its destination, which may take from two to three weeks or more."

"As soon as the bunch is cut from the tree, it is removed from its main source of growth, and immediately survives on the food it has stored up within itself, namely water and starch. This means that a chemical change takes place which produces heat."

"With this heat, and moisture which evaporates from the surface of all parts of the bunch into the surrounding atmosphere, and the carbon dioxide produced, also as a result of this chemical action, we have a condition that unless retarded will result in a very rapid ripening process and then decay."

"The fruit arrives at its destination still green and unripened. It may be stored for as much as three or more weeks in this condition before being prepared for sale. During this period it is again air conditioned to retard ripening. Finally it is treated by air conditioning so as to be suitable for sale, i.e. properly ripened and colored."

"To accomplish this ripening it is subjected to an entirely different set of temperature, relative humidity, air circulation, and air purity conditions. Here higher temperatures, lower relative humidities, very gentle circulation, and a higher concentration of CO₂ is used, so that a uniformly yellow color and a firm ripened fruit is produced. Saleability of fruits depends to a large extent on appearance, and firmness of the fruit is of great importance."

Curing Tobacco

"The methods outlined for bananas are much the same as those applied to curing tobacco, whether cigar, cigarette, or chewing. As the leaves are fully grown but still green, they are picked from the plant and hung in a curing shed."

"Here the leaves immediately try to survive by consuming the food stored up in them, again in the form of water and starch. By treating them with proper temperature, relative humidity, and air motion, the ripening process proceeds, and excess water is removed so the leaves can be packed and stored for future use."

"Tobacco used for wrappers in cigar manufacturing must be of fine texture, elastic, and of a desirable brown color. This determines the value of a particular crop. Color is

of utmost importance. Air conditioning assists in producing more uniform colors."

"In the dehydrating of fruits and vegetables air conditioning plays a large part in the actual dehydration process, as well as in packing and storage, so that they may be stored for many years, if necessary, without loss of nourishment values or deterioration."

"Air conditioning enters in a large measure in the manufacture of processed foods, such as bread, dry cereals, macaroni and spaghetti, instant coffee; in the curing of tea, manufacture of cocoa and chocolate, butter, lard, and the packaging of many such foods for proper preservation of freshness, taste, aroma, and other essential qualities. The manufacture of candy and confections absolutely depends upon air conditioning."

The Staff of Life

"As an example of processed food, bread is made up of a number of ingredients such as flour, water, butter, lard, milk, salt, and yeast. The ingredients in modern bread mass production are carefully stored at proper temperatures and humidities, so that when they are brought together ready for mixing, the weight, water content, and temperature are definitely fixed."

"It is then mixed in high speed mixers, with a controlled water cooled jacket, to absorb the heat generated in mixing, so that the temperature of the mixture mass will not go above a definite point, usually about 80° F. The resultant dough is then placed in a trough, which in turn is placed in an air-conditioned room, maintained at a definite temperature and relative humidity."

"This is known as the fermentation process, and the air conditions maintained are usually 78 to 80° F. dry bulb and 65 to 75% relative humidity."

"After the dough is fermented, it is divided into small lumps to form loaves of bread, and the lump placed in a small pan. These pans are then placed on trucks and placed in another air-conditioned room, maintained at a temperature of about 100° F. and a relative humidity of 90% or more. Here the stresses and strains set up in the dividing machine are released, so that the final grain of the baked loaf may be uniform. The dough is then ready for the oven."

"Since the loaf of freshly baked bread may not be consumed for at least 12 hours or more, it is necessary to seal in this freshness. This is accomplished by cool air maintained at high relative humidities."

"Air conditioning is used to promote healthful bacterial and mold action for some foods and to prevent harmful bacterial and mold action for other foods."

Brewery Conditions

"We even find air conditioning playing an extremely important part in the manufacture of beverages, particularly beer and ale and those having an alcoholic content. In fact, the brewing process depends upon accurate control of the biological action, both within the liquid and the spaces surrounding the containers in which the action is taking place, through the control of temperature, relative humidity, air motion, and, of very great importance, air purity."

"In brewing the processes are carried out at relatively low temperatures and high relative humidities, ranging from 45 to 55° F. dry bulb temperature and 65 to 75% relative humidity for fermentation to 33 to 35° F. dry bulb and 80% relative humidity for the racking room, with temperatures of 32 to 35° F. for aging and storage."

In Cookie Manufacture

"As an instance of the problems an air-conditioning engineer is required to solve in the food industry I believe the following is of unusual interest. The particular product is made up of a cookie, coated with marshmallow, and then finally coated with a sugar icing, of white, pink, or chocolate in color, to represent vanilla, strawberry, and chocolate."

"They are produced in mass by

placing the cookie (which is quite dry, almost at the crumbling point) on pins, which are a part of a conveyor. The conveyor then brings the cookies to a trough which contains marshmallow of a semi-liquid consistency, passing the cookies through this marshmallow. The cookies are then covered with marshmallow."

"The problem first is to skin dry this marshmallow quickly, so as to prevent the marshmallow from dripping off the cookie, while being conveyed to the final icing, and also to seal in the moisture remaining in the marshmallow. The marshmallow

coated cookie then passes through the icing, which is in a liquid condition, to receive a thin coating of icing, which again must be quickly dried, so that the whole coated cookie can be removed from the conveyor by hand, and immediately packed in containers."

"When the cookie is ready to be consumed, the moisture in the marshmallow has found its way into the cookie, making the cookie soft, and leaving the marshmallow in a gummy consistency without affecting the outside icing coating."

"This is accomplished by circulat-

ing air rapidly over the coated cookies while being conveyed. The temperature is maintained at 55° F. dry bulb and the relative humidity at 45%, while the marshmallow and the icing in the troughs are maintained at a slightly higher temperature, so there will always be a difference in vapor pressure between the marshmallow and icing as applied to the cookie and the air in circulation."

"Incidentally the peak sales for these cookies is during the summer, when atmospheric conditions make it impossible to manufacture them without air conditioning."



Far-flung vegetable gardens move into the neighborhood—THANKS TO BRUNNER

● Yes, from her neighborhood grocer, Mrs. Homemaker can now reap abundant harvests of garden-fresh vegetables as well as fruits. Brunner refrigeration sees to that. Kept under uniformly correct temperatures, these foods are wholesomely fresh—and look it. They appeal to the customer's buying eye—just as they appeal to family appetites. ●●● Thus it is that "refrigeration minded" merchants are stepping ahead in sales volume. For there's nothing like an up-to-date vegetable and fruit department to attract business. And besides this stimulant to trade, Brunner refrigeration helps lick that old problem of food spoilage. ●●● Brunner Condensing Units are ideally built for just this

kind of sales-creating service. From the ground up, every Brunner is a thorough-going commercial unit designed for exacting commercial applications. That, naturally, means a rugged, extra-heavy construction... oversize castings for example... bronze bearings at all rotating points... extra-large cooling fin areas... more abundant use of

copper... heavy duty motor. Every Brunner detail represents long-time dependability! And every Brunner has Underwriters' Laboratories approval and carries the U. L. Seal. ●●● The Brunner line includes air and water cooled condensing units from 1/4 to 25 tons of refrigeration. Data sent upon request. Write: Brunner Manufacturing Company, Utica, N. Y., U. S. A.



BRUNNER

FOR YEARS THE SYMBOL OF QUALITY

Local Retail Service 'Farmed Out' By Universal Cooler

DETROIT—Refrigeration Maintenance Corp. of Michigan, a newly formed organization, has been appointed to handle all retail service work for Universal Cooler Corp. in Detroit and vicinity, reports H. L. Morrison, Universal Cooler national service manager.

In addition, the new organization will handle installation and service on all makes of refrigeration and air conditioning equipment in this area.

Refrigeration Maintenance Corp. of Michigan is the third unit under the ownership and management of T. J. Reedy and A. G. Weil, who operate Refrigeration Maintenance Corp. and North Town Refrigeration Corp. in Chicago. First of these companies has been operating since 1930, and the second since 1935.

When Refrigeration Maintenance Corp. was organized in Chicago in 1930, Mr. Reedy and Mr. Weil handled all service work themselves. The present organization has more than 100 employees, maintains its own engineering department, and makes an analysis of service complaints received from the field as an aid to manufacturers it represents.

The new organization has taken over the service personnel of Universal Cooler, and will maintain a complete service and installation organization available to manufacturers, distributors, and users. Large stock of parts also will be kept, reports Mr. Weil.

Location of the firm is at 4473 Cass Ave., near the geographical center of Detroit.

Pressure Drop Termed 'Important Factor' By Gygax & Willson

CHICAGO—Pressure drop in liquid lines is an important factor in the operation of refrigeration systems, because the greater the pressure drop the less completely is used all the "refrigeration" energy developed by the compressor. Also, the more pressure available, the smaller the expansion valve can be.

This was the point made by E. Gygax, chief engineer of the Curtis Refrigerating Machine Co. of St. Louis, in giving the paper on "Pressure Drop in Refrigerant Liquid Lines," prepared by himself in collaboration with Karl S. Willson of the Ansul Chemical Co.

The paper described experimental tests covering frictional pressure drop in various pipe sizes for different tonnages.

Tests showed that the amount of oil mixed in with the refrigerant had a great deal to do with the extent of the pressure drop effect, an oil-refrigerant mixture with 5% oil increasing many times the pressure drop effect over what it would have been with pure refrigerant. Methods of determining the exact effect of oil on pressure drop were described.

Other factors which tend to increase the pressure drop effect, said Mr. Gygax in his discussion, are restrictions and bends in the liquid line tubing, and pulsations on the tubing received from the compressor.

Meyer Opens Plant

JEFFERSON, Wis.—Philip Meyer, Reedsburg, is opening a refrigerated locker plant in this city.

Here's How—One Locker Plant Operator Boosts Profits

Friendly Cooperation and Smart Selling Combine To Build User Volume

OLNEY, Ill.—An example of how a locker plant operator who is continually on his toes and alert for new business opportunities can develop his plant's patronage and volume is offered by Marion F. Meadows of the Ebner Ice & Cold Storage Plant here.

Proof that Mr. Meadows' efforts have been effective is the fact every one of the plant's 126 lockers are rented at prices ranging from \$10 to \$12. Plant space is available for a total of 450 lockers, some of which may be added later on, but at present Mr. Meadows has his hands full seeing to it that the customers which he already has receive proper service.

From the outset, Mr. Meadows recognized the merchandising possibilities offered by the plant, so he set to work to sell a local frosted food distributor on renting bulk space in the locker room. This space, which measures 12 x 14 feet, is set off by a framework of wood and wire.

PROFIT WITHOUT EFFORT

Renting for well over \$200 per year, this bulk storage space is a steady producer of revenue which requires no continuing effort upon the part of the operator. The distributor stacks his own merchandise, keeps his own key to the enclosure, and comes into the plant to get his merchandise as he pleases.

In another instance, Mr. Meadows discovered that the local poultry dealer wasn't realizing the fullest possible profit on his chickens, so he sold him on the idea of dressing the birds and bringing them to the locker plant in stamped boxes. At the plant they are stored in a 20 x 25-foot room, set off from the locker room and kept at a temperature of -12° F., until there is a demand for them on the Chicago market.

A railroad siding runs along the back of the plant, so that the chickens can be loaded directly into refrigerated freight cars. The space in which they are stored is rented to the producer on a cubic foot basis.

PROFIT FROM PRODUCE

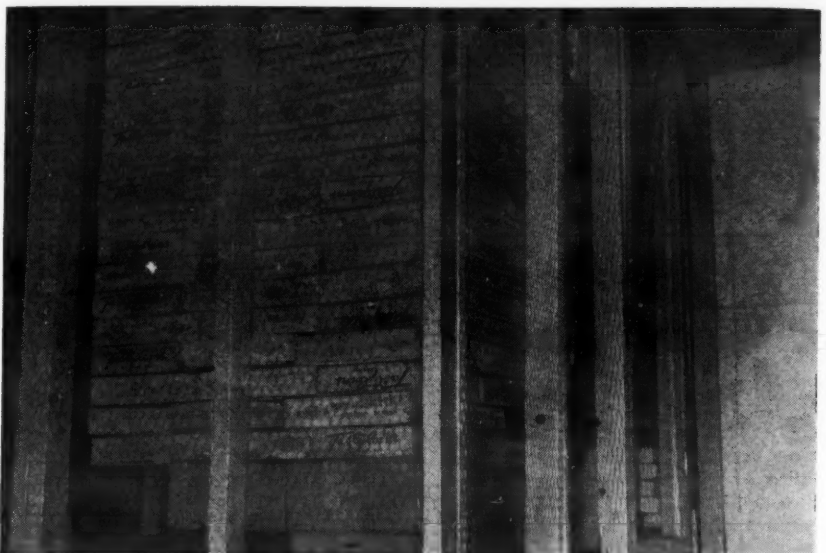
To increase the plant's income even more, Mr. Meadows has encouraged its patrons to store fruits and vegetables in their lockers as well as meats. He has convinced many of them of the fact that fresh frozen produce adds variety to winter meals and results in worthwhile economies in the food bill. As a result of this educational work, 25 to 35% of the food stored in the lockers is produce, most of which has been raised by locker owners.

Sale of packages in which to store this produce provides another source of revenue for the plant.

Mr. Meadows also has encouraged farmers in the vicinity to use the



Manager Meadows stands by the canvas compartment which he constructed in his plant's chill room to prevent "sweating" of carcasses.



Here is the bulk storage enclosure which Mr. Meadows rents to a local distributor of frozen foods for storage of surplus stocks.

plant as a meeting place, and he always takes time to discuss their problems with them.

As another goodwill gesture, Mr. Meadows serves as a trading agent by introducing farmers that have products they would like to exchange to other farmers in the same position.

As a result of these friendly gestures, Mr. Meadows has become acquainted with most of the farmers in the area, so when he goes out on his periodic customer-hunting trips (he allows a half day each week for this kind of work) the prospects all know who he is and are willing to talk business.

As for the plant itself, Mr. Meadows has added a novel touch or two to that, also. Incorporated in the 10 x 12-foot chill room (which is held at a temperature of 34 to 38° F.) is a canvas covered compartment in which the warm, freshly slaughtered carcasses are placed.

With this arrangement, the steam caused by the cold air hitting the warm carcasses goes up and over the overhead coils, rather than settling and condensing as "sweat" on the already chilled carcasses in the room.

Govt. Chemists Perfect Apple Slice Freezing

SEATTLE—Perfection of a method of freezing sliced apples without the slices discoloring has been announced by U. S. Government chemists.

H. C. Diehl, senior chemist of the Department of Agriculture and head of the government's frozen pack laboratories here at Seattle, has declared that this new method "means that frozen apple slices as white as the day they were cut soon will be pouring into eastern markets."

Add Our Experience to Yours...

If a comfort-cooling, product-cooling or heavy-duty refrigeration unit is needed as an essential part of equipment you make, sell, or use—enlist GR-Lipman specialized engineering knowledge and service-tested units. Add our experience to yours.

GENERAL REFRIGERATION CORPORATION
Dept. AC-3 Beloit, Wis., U. S. A.

MODEL 153
Water-cooled

POSITIVE *Control* OF TEMPERATURE THROUGH PERFECT BALANCE

THE NEW McQUAY ZEROPAK
A COMBINATION SHARP FREEZER AND LOCKER ROOM COOLER

LOOK AT THESE ADVANTAGES

Lower Power Cost
Quicker Freezing
Water Defrosting
Factory Engineered
Low Original Cost

THE NEW McQuay Locker Room Unit is made in the sizes to exactly match or balance the standard compressors of 1, 1½, 2, 3, 5 and 7½ h.p. This permits the unit to operate at full capacity which not only provides top efficiency but positive control of temperature as well... This new McQuay Unit is self contained with built in water defroster and sharp freezer. Easily installed. Defrosts in 4 to 5 minutes. Entirely eliminates sharp freezing room, permitting more rentable space. Costs no more than older methods. See your locker plant engineer or write McQuay, Inc., 1607 Broadway, Minneapolis

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ZEROPAK
LOCKER ROOM UNIT

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PURE LAKE
COPPER

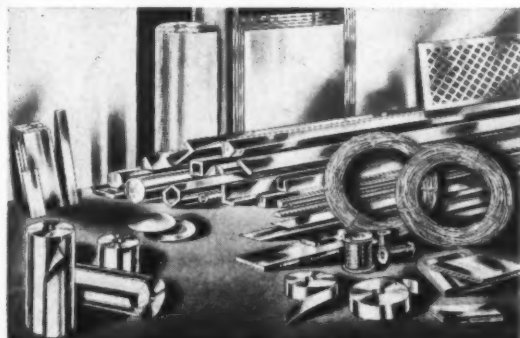
it's **"TOPS"**
FOR
WORKABILITY

Copper **HUSSEY** Brass

Heating, Piping and Air Conditioning craftsmen everywhere prefer to work with genuine Hussey Pure Lake Copper because it readily shapes and conforms to the most difficult fabricating jobs—a quality peculiar to Pure Lake Copper only. It is one of the several outstanding properties which have made Hussey Pure Lake Copper famous for nearly a century—why it will pay you to specify and use Hussey Pure Lake Copper on your equipment.

C. G. HUSSEY & CO.

(Division of Copper Range Co.)
Rolling Mills and General Offices: Pittsburgh, Pa.
Warehouses in Principal Cities



Three Stars In a Commercial Movie



The new Hotpoint full-length movie, "Blame It On Love," which will be ready for use by Hotpoint retailers in March, has a star-studded cast. Here two well-known movie players, Nella Walker (left) and Joan Marsh (right) enact a scene showing how the younger woman discovers that delicious desserts can be made in modern electric refrigerators.

'Blame In on Love,' Says Hotpoint Movie

CHICAGO—"Blame It On Love," Hotpoint's full-length motion picture, with a cast of over one hundred including a star-studded lineup in the top roles, has recently been completed, and prints will be made available during March in each of the 12 Hotpoint districts.

The picture will be shown under the auspices of local retailers and utilities selling Hotpoint appliances, and will offer a real dramatic "Punch to increase sales, it is said. To aid dealers in getting the most out of the showing of the picture, exploitation books will be made available.

Produced in the Hal Roach Studios in Hollywood, the film required 28 sets on two sound stages, and more than 600 people, including cast and army of technicians and set workers, were called into action.

FACTORY ADVICE

Miss Mildred Hickman, manager of the Hotpoint home economics department, was on the set to supervise all sequences in which Hotpoint appliances were used. L. J. Sholty, vice president of Maxon, Inc., Hotpoint advertising agency, acted as technical advisor for Hotpoint.

Dramatic sequences were directed by Wallace Fox, formerly of RKO, and musical sequences were directed by R. LeBorg, who directed such recent film hits as "There Shall Be Music" and "Intermezzo." A theme song, "Blame It All on Love," was written for the picture by Marvin Hatley, Hollywood composer and conductor.

Cast in the starring role as Terry Arden is Joan Marsh, who appeared recently in MGM's "Idiot's Delight" and in other prominent photoplays. Playing opposite her as Jeff Wadsworth is John King. Other prominent film players in the cast are Nella Walker, Cissy Loftus, Morgan Wallace, and Mary Forbes.

'SWING' ROMANCE

"Blame It on Love" is the story of torch singer Terry Arden who falls in love with wealthy Jeff Wadsworth. Despite his family's objections to his marrying a "swing" singer, the youngsters elope. Terry's attempts to create a happy home are blocked by her absolute lack of housekeeping ability. Her cooking is strictly minus. When they quarrel over the young wife's kitchen shortcomings, she up and leaves and it looks as though the romance is as flat as her first cake.

But Terry finds a spot as singer on a new radio program, "Modern Home of the Air," featuring the Hotpoint electric kitchen. Here the Hotpoint appliances move into the center of the stage and as Terry learns the

simplicity of cooking and living electrically, she blossoms out as perfect homemaker.

All which serves to effect a reconciliation with her husband, as Terry proves to him and his doubting family that she has become a real homemaker, an ace cook—thanks to the help of her Hotpoint appliances.

Laundry Units & Sheets Promoted Jointly By G-E & Penney Co.

BRIDGEPORT, Conn.—To prove that both General Electric home laundry equipment and J. C. Penney Co. sheets were made to last a long time, the two firms recently co-operated in an experimental test in the G-E laboratories here which formed the basis of a cooperative promotional campaign on both lines of products.

Timed to break with the annual January "white sales" in retail stores, this campaign resulted directly from a scientifically planned test period during which both sheets and laundry equipment were subjected to the equivalent of five years of wear and tear.

ROUGH ROUTINE

Each of the standard Penney bed sheets sent to the G-E laboratories was put through the following routine 130 times: it was washed in hot, soapy water for 5 minutes, damp-dried in a G-E spin basket or put through the wringer for 2½ minutes, activator-rinsed for 2½ minutes in cool water, damp-dried in a spin basket or put through the wringer for another 5 minutes, dried in a G-E tumbler dryer for 15 minutes, then ironed on a flatplate or rotary ironer for a final 4 minutes.

Not counting handling and breathing time, this meant that each sheet tested went through 73 hours and 40 minutes of strenuous laundering.

When the tests were completed, the sheets were sent back to the Penney laboratories where they were carefully analyzed and inspected for wear. Every one was reported to be in excellent condition and ready for many additional years of service.

THOROUGH CHECK-UP

The G-E equipment used in the tests was thoroughly inspected by T. B. O'Gara, service manager, and reported to be in the same condition as the sheets.

Augmenting this test procedure, a number of G-E dealers conducted similar experiments with like results.

All dealers were urged to make full use of the sales ammunition provided by these tests—with emphasis on the "long life" and "easy on clothes" themes—and to cooperate with managers of the various Penney stores in arranging window and floor displays telling the double story.

Omaha's Appliance Sales Up 6% In 1939; Range Sales Zoom Up 157%

OMAHA, Neb.—Unit sales of all electrical appliances by Omaha dealers were up 6% for 1939. All major appliances except refrigerators, which dipped 1% for the 12-month period, showed increases. Gains ranged from 1% in radios to 850% for dishwashers.

Other appliance sales gains for the year were recorded in ranges, 157%; water heaters, 34%; washers, 18%; ironers, 3%; vacuum cleaners, 9%; oil burners, 5%; stokers, 51%; and air conditioning equipment, 283%.

Unit sales for the year, compared with those for 1938, are as follows:

	1939	1938
Refrigerators	5,380	5,433
Ranges	422	164
Water Heaters	125	93
Washers	3,620	3,055
Ironers	528	511
Dishwashers	19	2
Radios	14,160	13,968
Vacuum Cleaners	2,595	2,377
Stokers	351	232
Attic Fans	29	64
Roasters	787	790
Oil Burners	962	918

December sales also showed gains in most classifications, the month's figures for the two years being:

	1939	1938
Refrigerators	234	151
Ranges	37	12
Water Heaters	9	3
Washers	267	201
Ironers	41	58
Vacuum Cleaners	320	308
Stokers	27	16
Roasters	215	164
Air Conditioning	10	0

Special Customer Research Dept. To Be Established By Frigidaire

DAYTON, Ohio—A full-fledged "Customer Research Staff" which will busy itself in investigating and analyzing consumer and prospect opinion in order to determine just what the public wants in the way of air conditioning, refrigeration, and major household appliances will be set into operation by Frigidaire about the middle of February, according to the company's present plans.

This program, which will involve the cooperation of Frigidaire dealers in all sections of the country, will be modeled closely along the lines of the customer research activities of General Motors. The Frigidaire operation will be entirely distinct from that of the parent corporation, however, and will have its headquarters here.

Playing an important part in this new program will be an extensive and continuous study of the important farm and replacement markets. Special surveys will be launched for the purpose of obtaining facts that will assist the company in its promotional activities in these two currently important fields.

Object of the entire program, of course, is to aid the company in developing its products along lines which will conform more closely with the specific desires of users and potential buyers.

While Frigidaire, through its regular market investigations and contact with users, has before used field opinion as a guide to product design,

the intensified activity to be undertaken by the Customer Research Staff will enable the company to cover this field more thoroughly and scientifically, according to C. A. Copp, vice president.

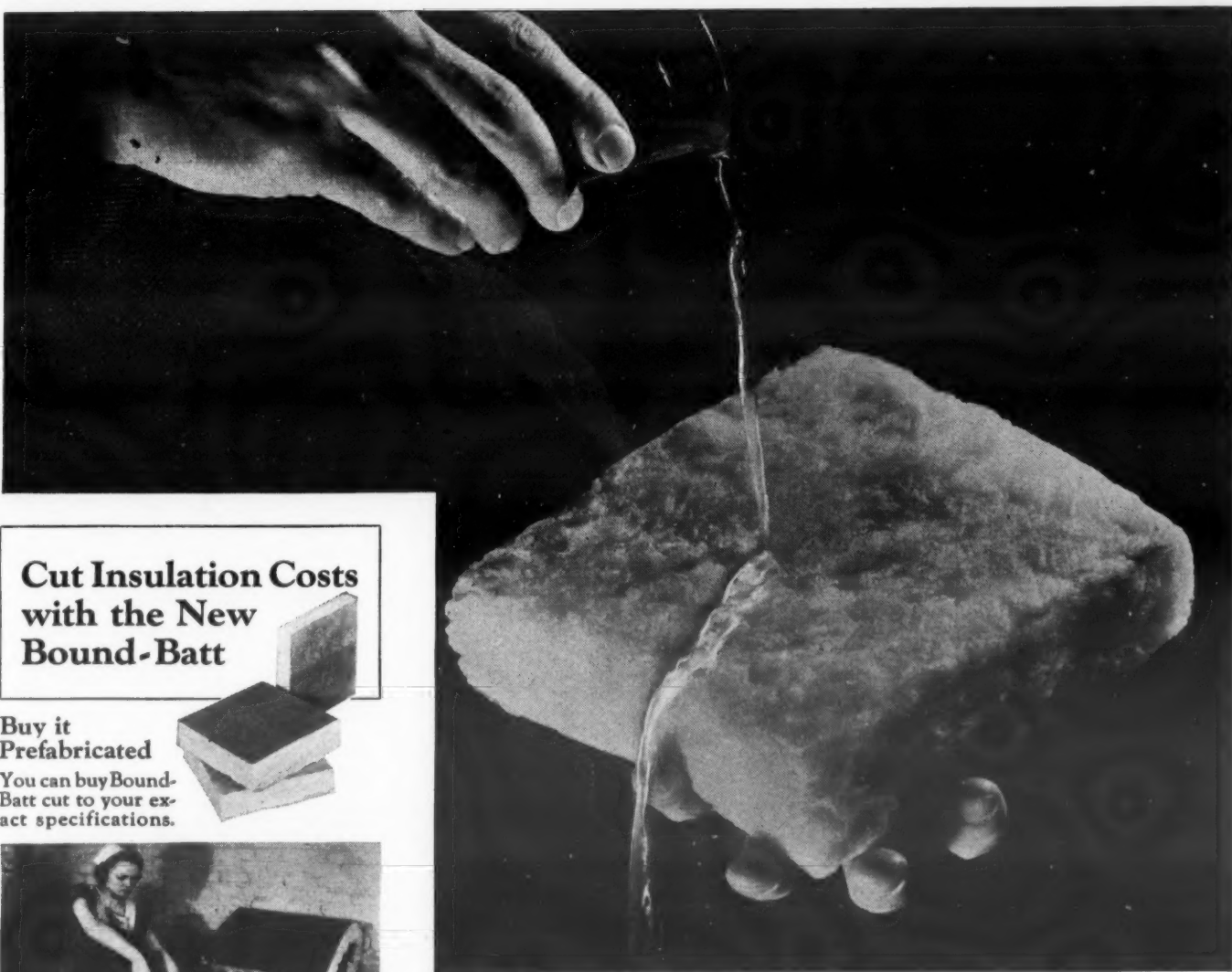
"There is hardly a phase of our business that has any relation to product design and sales policy that won't be included in this new program," Mr. Copp declared. "Our intention is to make direct contact with those who are in the best position to give us the answers to every question pertinent to our products."

NRDGA 'Primer' Outlines Retail Personnel Program

NEW YORK CITY—Fundamentals of a sound personnel program for the retail store are outlined in the 165-page "Retail Personnel Primer" just published by the smaller stores bureau of National Retail Dry Goods Association.

Aim of the primer is to present in simple form the principles, procedures, and methods which are generally considered essential in the setting up and carrying out of a well rounded store personnel program. It is the result of a composite effort on the part of personnel executives in the retail field. Price of the primer is \$1.50 to association members, and \$2.50 to non-members.

Does your insulation shed water -- like a duck--



Cut Insulation Costs with the New Bound-Batt

Buy it Prefabricated
You can buy Bound-Batt cut to your exact specifications.



CUT IT ON THE JOB—Bound-Batt may also be purchased in rolls and then cut to size with an ordinary knife, as needed.



EASY TO INSTALL—Bound-Batt is stiff enough to handle, yet flexible enough to fit irregular refrigerator contours.

Or—does it soak up moisture and become soggy and worthless?

When new, your refrigerator insulation may keep out heat. But if it is water-logged by the condensation of water vapor in the air, its insulating efficiency is destroyed. Dry-Zero is naturally waterproof. It sheds water "like a duck" and does not lose its thermal efficiency during the lifetime of the refrigerator. Dry-Zero Corp., 222 N. Bank Drive, Chicago.

★HIGH EFFICIENCY—Dry-Zero has a "k" factor of 0.24—the lowest of any commercial insulant.

★LONG LIFE—Maintains its thermal efficiency for life. Does not rot, mold, pack, or absorb moisture.

★NEW LOW COST—In the new Bound-Batt form, Dry-Zero is lower in first cost and installation cost.

DRY-ZERO INSULATION

What's New

Descriptions of some of the brand new items for the refrigeration and air conditioning, and major appliance fields.

Penn Offers Combine Of Starter & Control

New lines of refrigeration thermostats, line starters with pressure or temperature control combined in a single case, "streamlined" water valves, and a refrigerant strainer are 1940 additions to Penn Electric Switch Co.'s line.

Heavy duty cooling thermostat



Lettering on pad at only \$1.00 per order extra. Write for latest folder and prices on pads for refrigerators, washers, ironers, ranges, radios, etc.

BEARSE MANUFACTURING COMPANY
3815-3825 Cortland Street, Chicago, Illinois

(type 875A01) is recommended for direct control of compressors within its rating. It incorporates Penn's snap-acting contact structure, actuated by means of a sensitive bimetal coil. Supplied with a cover finished in dull antique silver with recessed thermometer, the unit has an outside calibrated adjusting dial for easy adjustment, and an internal dial locking screw for locking the setting, when desired. The unit is available in a variety of temperature ranges.

For pilot service, either low or line voltage, the company has type 873A01, which may be used to control motors, valves, or starting equipment where the current flow through the thermostat circuit is .5 amp. or less up to 250 volts. This unit is especially designed for cooling service, as well as commercial applications where appearance is desirable. Finish and adjustments are similar to that of the control mentioned above, and the unit may be had in a variety of temperature ranges.

The line starter and pressure or temperature control combinations, known as the multi-function controls, are designed primarily for use on heavy duty refrigeration and comfort cooling compressors with integral horsepower motors in excess of the rating of low side pressure controls regularly available.

These units combine in one case a line starter mechanism, supplied in two, three, and four-pole construction, with a low side pressure control or with charged element for temperature service.

Pressure control is wired into the

pilot circuit, and installation wiring requires making only line and motor connections to the starter, it is claimed. Line starter mechanism is solenoid operated, to insure positive action of the contacts, both on closing and opening.

Overload relay assemblies are enclosed in a bakelite case which attaches to the sides of the starter frame. Proper heating element for the motor to be controlled may be inserted in the field.

A separate series in this line includes independent high pressure safety cut-out mechanism in addition to the low pressure controlling side.

Water valves are available for all standard "Freon," methyl chloride, and sulphur dioxide applications in the 230 series, and valves in the 250 series also are available with monel bellows suitable for ammonia refrigeration systems. The valves are regularly equipped with copper bellows. Internal parts may be removed for cleaning without removing the valve from the water line, it is claimed.

Although designed primarily for use with "Freon," methyl chloride, and sulphur dioxide refrigerants, the protective strainer, another new addition to the Penn line, also is adaptable for use with water. Strainer body is cast bronze, with $\frac{1}{2}$ -in. I.P.T. inlet and outlet tappings. For refrigerant service, 100 mesh screen is supplied; 40 mesh screen is supplied for water service.

DFN Dryer Available With Silica Gel

Several extensions have been made to McIntire Connector Co.'s line of DFN dryers, strainers, and filters, notably the inclusion of Silica Gel as a drying agent to be used with DFN assemblies, both in cartridge form and in the non-refillable type dryers.

Extensions of the DFN line include a complete list of filters and filter-dryer assemblies to accommodate any size of mechanical refrigerating system. Larger sizes of the side outlet strainer series also have been added.

Feature of the McIntire exhibit at the All-Industry Show was the DFN Evaluator, a method of determining the correct value of drying agents in moisture absorption, developed by L. S. Dunn, chief engineer of the company.

Protective Device For Workmen's Feet

PITTSBURGH—A "safety insole" has been developed by Mine Safety Appliance Co. as protection for the feet against nails, spikes, sharp metal projections, and other underfoot hazards.

Built of two layers of overlapping steel strips in moulded-in rubberized fabric, the insole is claimed to be light and flexible, bending with every movement of the foot, and yet capable of preventing injury from penetration of the boot sole by sharp pointed objects.

Muzzarelli Beverage Coolers Use Gun Units

A new line of "Kool-Kwik" beverage coolers designed for extra-capacity dry storage type cooling is being introduced by E. B. Muzzarelli & Co. The units are of the display case type, constructed of metal, and with exterior finish of baked enamel.

Coolers will be available in lengths of 50 inches and 6 feet, either with or without compressor cabinet or condensing unit. Compressor cabinet adds 20 inches to the length of either of the units. Four inches of insulation is being used on all models.

Capacity of the 50-inch cooler is 16 cases of 12-ounce bottles, while the 6-foot cooler will accommodate 24 cases of 12-ounce bottles. Smaller cooler has four removable and adjustable partitions, and the larger unit has six such partitions.

To assure even temperature and rapid cooling in the units, the 50-inch unit is equipped with two gun coolers, and the 6-foot model with three gun coolers, each cooler serving two compartments, and being equipped with its own expansion valve for closer temperature regulation.

Continual circulation of air will be maintained around the bottles in each compartment, it is claimed, the gun coolers circulating the air about 10 times per minute.

Model numbers and overall dimensions of the units are as follows:

450—Without condensing unit or cabinet. Length, 50 inches; height, 39 inches; width, 30 inches.

470—With condensing unit and cabinet. Length, 70 inches; height, 39 inches; width, 30 inches.

472—Without condensing unit or cabinet. Length, 72 inches; height, 39 inches; width, 30 inches.

492—With condensing unit and cabinet. Length, 92 inches; height, 39 inches; width, 30 inches.

3-Blade Fan For Light Pressure Work

TORRINGTON, Conn.—New series of three-blade fans for air circulator work has been developed by Torrington Mfg. Co. The fans are now available in eight diameters, from 10 to 30 inches. Slightly increased pitch of the fans is claimed to give them a free air performance equal to the company's four-blade fans of equal diameters.

Although designed primarily for free air use, the fans are said to be applicable to light pressure work, such as evaporative coolers and similar uses.

Furnace Humidifier Has Outside Float

CLEVELAND—A new humidifier for winter air conditioning systems, which has the float tank outside the furnace where all working parts are accessible, has been announced by the Viking Air Conditioning Corp.

The evaporating pan, protected by two coats of porcelain enamel, can be installed in warm air plenum chambers, ducts, and small cabinet spaces. Twelve Pyroxene evaporator plates, suspended in a copper rack, provide an evaporating surface of 480 sq. in.

Wrought Copper Fittings Cataloged

ELKHART, Ind.—Northern Indiana Brass Co. has issued a new catalog incorporating extensive data on the valves and fittings required for

copper plumbing as well as in the refrigeration field.

Products listed in the catalog include wrought copper fittings, cast solder fittings, drainage fittings, flared tube fittings, and 125 lb. and 150 lb. valves in gates, globes, angles, and checks.

The company recently has developed a new type of ballcock, working from the hydraulic principle of shutoff rather than the leverage principle.

For the convenience of persons in the refrigeration trade, actual as well as nominal sizes are given in the section of the catalog devoted to wrought fittings.

Crosley Washer Tubs Are 'Air Conditioned'

CINCINNATI—Air-insulated tubs designed to keep washwater hot during the entire washing are prime features of two new washing machines introduced by Crosley Corp.

Both models are of double-tub construction, with 1 inch of air space between the tub and the outer shell.

Other features of these units include: porcelain enameled bottle-neck tub, streamlined lid of rust-proof galvanized steel, rubber edge ring to seal in steam and heat and to protect edges of both tub and lid, and a recessed lid button.

Both employ a "Duo Disc" agitator made of cast aluminum with polished tube. This agitator is removable and may be operated in top or bottom position, enabling the user to wash either a few pieces or a capacity load.

The agitator control is a patented clutch with automobile type lever. There also is a time switch which can be set to automatically stop the motor at the desired time.

Driving mechanism is ball bearing, entirely sealed with few moving parts that operate in a special lubricant said to last the life of the washer. The completely insulated $\frac{1}{4}$ -hp. motor is splashproof, requires no oiling, and is mounted on the same frame as the driving mechanism.

At slight additional cost, these models may be equipped with a motor-driven drain pump.

Entire weight of the driving mechanism is suspended from heavy-formed steel arch, relieving the tub of all weight and strain. Steel base and legs are welded into one solid between the tub itself and the outer unit.

The Lovell wringer is adjustable, of the pressure-cleaning type with soft laminated rolls 2 inches in diameter, and has an indicator-style Tenite pressure knob that shows the correct pressure to apply to the various materials.

In addition to the two double-tub models of 22 and 25-gallon capacity each, there are two models of 18 and 22 gallons without the double tub.

Frigidaire Adds New Water Heater At \$71

DAYTON, Ohio—Three electric water heaters of cylindrical type have been added to Frigidaire's line of this appliance for 1940. Smallest of the units, which has 30 gallons capacity, has a zone 2 delivered price of \$71. Other models have capacities of 40 and 50 gallons.

Addition of the units is designed to cover that section of the water heater field where price is a dominating factor. Operating features are said to be the same as in other Frigidaire heaters. Tanks are galvanized, and a choice of single or double heating units is afforded. Design of the new heaters includes solid black base with cabinet finish of white Dulux.

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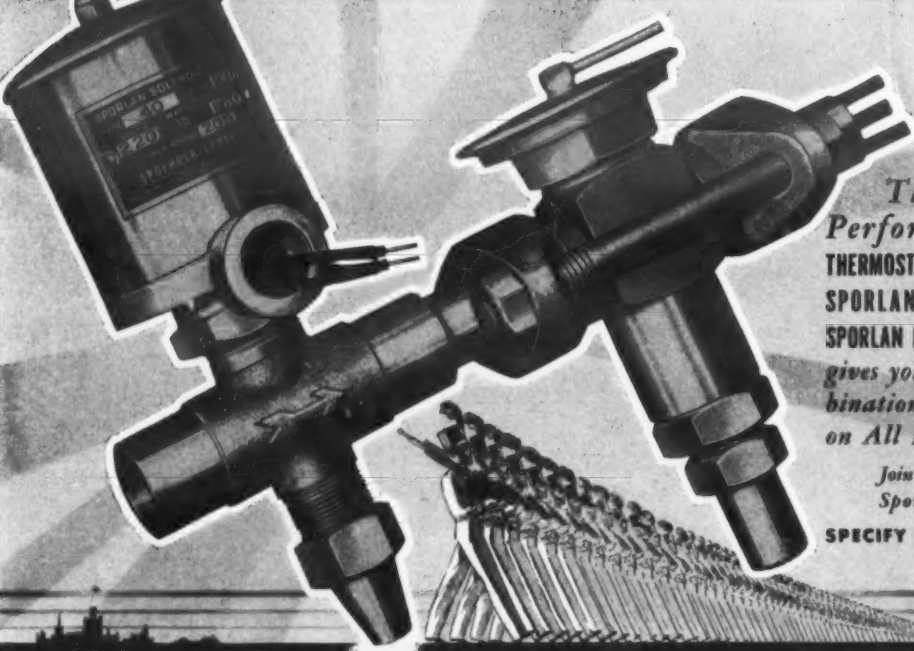
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Changes In Law Should Reduce Delays In Obtaining Patents

SYRACUSE, N. Y.—Reduction of the public use period from two years to one year and the elimination of costly delays in obtaining patents are named by Herman Seid, patent counsel for Carrier Corp., as among the most important revisions by the last session of Congress of the Patent Laws.

Of his survey of the 1939 patent law changes, Mr. Seid states:

"All the changes relating to patents tend to reduce delays in the prosecution of applications and in interference proceedings, and in general have had the approval of manufacturers, as well as the Patent Bar.

"The change which will probably do much to speed up the filing of applications is the amendment to the law whereby the 'public use' period is reduced from two years to one year. This change becomes effective Aug. 5, 1940, and applies to all applications filed on and after Aug. 5, 1940.

'PUBLIC USE' TERM CUT

"Any patent issued on an application filed on and after this date will be invalid if the invention in question has been in public use or on sale in the United States for more than one year prior to the filing of the application. Likewise, such patent will be invalid if the invention was patented or described in any printed publication in any country for more than one year prior to the date of application. The present period, which still applies to applications filed prior to Aug. 5, 1940, is two years.

"In suits for infringement, as against patents filed on and after Aug. 5, 1940, the defendant will have available as a good defense, assuming the fact can be proved, that such publication or public use took place more than one year prior to the date of filing of the patent on which the suit is founded. Therefore, in all cases where prior publication or public use exists, which, by reason of the reduced period, would invalidate patents for which applications are filed subsequent to Aug. 5, 1940, it is essential that the filing be completed prior to this date."

NO BOARD OF APPEALS

Another change listed by Mr. Seid abolishes appeals to the Board of Appeals of the Patent Office in interference cases. Instead, a Board of

three Examiners of Interferences will determine the question of priority of invention. The Commissioner of Patents may then forthwith issue a patent to the party who is adjudged the prior inventor by such Board.

While this change in the law will not deprive the losing party of his right to take an appeal to the U. S. Court of Customs and Patent Appeals, or to proceed for relief in the Federal District court, the winning party will be enabled to obtain the patent without further delay.

SHOULD CUT COSTS

The revision not only reduces the time element, but also will probably result in reduced costs to parties involved in interferences. This change became effective Oct. 5, 1939, with respect to interferences declared on and after this date.

Another change obligates adverse claimants to copy claims from an issued patent within one year from the date on which said patent was granted, he said. The copying of claims from an issued patent is done by applicants for patent in order to provoke interferences, where such applicants feel themselves entitled to the claims already issued in a patent. The change in the law now fixes a time limit of one year within which applicants may seek to obtain priority to such claims. This act takes effect on Aug. 5, 1940.

SPEED-UP IS SEEN

Prosecution of patent applications will be speeded by a revision that authorizes the Commissioner of Patents to require an applicant to respond to an action of the Patent Office within a period less than six months. Prior to the change, the time for responding to an action of the patent office was six months. The Commissioner of Patents can now speed up the examination of applications by requiring a response within a shorter time, provided it is not less than thirty days.

"The last of the changes of importance to those interested in patents is the change abolishing renewal applications," the Carrier counsel held. "Such applications formerly could be filed by an applicant who failed to pay the final fee subsequent to allowance of the application, so long as the renewal application was filed within one year after the date of the notice of allowance.

RENEWAL APPLICATIONS

"Such filing often resulted in a new examination which might cause the application to pend in the Patent Office for a considerable period of time, even though the original application might previously have been prosecuted in the Patent Office for a period of years. This is now abolished. Once the application is allowed, the applicant must pay the final fee in order to receive the patent.

"The six months period during which the final fee must be paid is not extended by the change in the law, except that the Commissioner of Patents in his discretion may receive the final fee if paid within one year after the six months period for payment has passed, whereupon the patent will issue."

New Dehydrating Oven Aimed For Service Shops In Refrigeration Work

MINNEAPOLIS—Available now for use in refrigeration service shops is the C-20 electric heating dehydrating oven made by Despatch Oven Co., which has recently been redesigned and improved.

The unit has standard swinging doors, and is of large capacity to take the larger refrigerator parts. It can be used not only for drying and dehydrating, but also can be used for the baking of finishes on parts that can be placed inside the oven, as well as for the baking of insulating varnishes on rewound motors.

Maximum oven temperature is 300° F. with bi-metallic automatic temperature control, housed in a steel control cabinet to protect it from injury and dirt.

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REPLIES to advertisements with Box No. should be addressed to Air Conditioning & Refrigeration News, 5229 Cass Ave., Detroit, Mich.

POSITIONS WANTED

EXPERIENCED EXPORT manager wants position in export department of responsible manufacturer. Just returned to U. S. from six years abroad as sales representative in South and Central America. Speak and write English, Spanish, and Portuguese. Age 36, 10 years in refrigeration—household, commercial, parts, etc. Married. Residence Long Island, N. Y., but willing to move anywhere in U. S. Box No. 1196.

U.E.I. GRADUATE in air conditioning wants part time work (mornings) with air conditioning contractor in the Detroit area. Sole object is in acquiring experience in estimating loads, layout work, installation and service. Salary no consideration. Good character references. Box No. 1201, Air Conditioning & Refrigeration News.

APPLICATION ENGINEER experienced on commercial refrigeration and air conditioning desires position with reputable distributor. Four years development experience and two years sales engineering. Engineering graduate, 36 years old, married. Middle west location preferred. Box No. 1202, Air Conditioning & Refrigeration News.

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LARGE DETROIT DISTRIBUTOR has a permanent connection open for an experienced commercial refrigeration salesman representing a well known manufacturer with the oldest name in commercial refrigeration. Attractive remuneration. Give full particulars and experience confidentially in first letter. Box No. 1198, Air Conditioning & Refrigeration News.

AN EXPERIENCED air conditioning and refrigeration sales engineer with car wanted for permanent commercial sales position by Detroit office of large manufacturer. Salary and commission. Write giving complete qualifications, education and experience. Box No. 1200, Air Conditioning & Refrigeration News.

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THE COUNTER FREEZER business is a big business—over \$2,000,000 sales in 1939 to druggists alone. And druggists are not the best prospects. Market includes confectioners, restaurants, hotels, grocers, bakers, roadside stands, schools, hospitals, and thousands of other prospects you call on every day. Dozens of prospects in your city or town. Leading manufacturer with complete, nationally advertised line wants distributors for Indiana, Illinois, Missouri, Oklahoma, Kansas, Iowa, North and South Dakota, Colorado, Oregon, South Carolina, Alabama, Mississippi, West Virginia, New York State, and other valuable territories. Peak season starts soon, so write at once. Box No. 1193, Air Conditioning & Refrigeration News.

DIRECT FACTORY CONNECTION—Make all the profit yourself by selling refrigerator display cases, walk-in coolers, compressors, to meat markets, grocers. Financing arrangements for time sales. Write for full information, or see EHRICH REFRIGERATOR MFG. CO., St. Joseph, Mo.

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ELECTRIC WATER Coolers—Frigidaire bottle and pressure types, A.C. and D.C.—running condition—"As is"—From \$10.00 to \$30.00. For further details, call or write A. H. HENRY, 4216 13th Street, Long Island City, N. Y.

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Chapter 2

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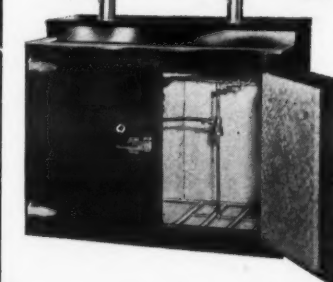
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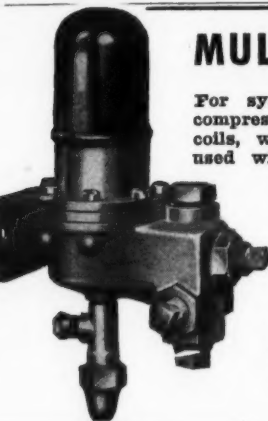


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E. N. Guild Is Making Trip 'South of the Border' For Norge Interests

DETROIT—E. N. Guild of Norge's export department is making an extended four-month business trip through the West Indies and South and Central America, traveling exclusively by air.

Enroute Mr. Guild plans to check new business possibilities, aid newly appointed Norge outlets in organizing their departments and activities, and offer technical and merchandising counsel to established Norge distributors.

Among his scheduled ports of call are Cuba, Puerto Rico, Trinidad, Venezuela, Colombia, Ecuador, Peru, and Chile. He will return through the Central American countries, completing his trip in Mexico.

Design and Applications of a Capacity Booster Valve

Has Variety of Uses In Commercial Cooling Systems

CHICAGO—The many different uses of the capacity booster valve were described in detail before the national meeting of the Refrigeration Service Engineers Society here last week by George H. Clark of the Square D Co.

The capacity booster valve is a new design of an old type of valve, Mr. Clark explained. It is a pilot operated valve which utilizes a difference in inlet and outlet pressure in order to operate the valve itself.

A pilot valve or valves are used in a pilot circuit in order to regulate the operation of the main valve. The main valve, said the speaker, consists of the valve seat and the valve disc. A restrictor piece is used to insure that the rate of flow

nearly equal to the inlet pressure, there is a very small difference in pressure across the piston with the result that the spring No. 12 tends to move the valve toward the closed position. As this occurs, the flow is restricted which will tend to reduce the outlet pressure below the inlet and this difference again tends to open the valve.

"Consequently this valve will modulate the flow so as to just maintain the pressure difference across the valve required to keep it open. If the flow is quite small the piston may not move back more than a very small distance whereas if a sufficiently large flow is maintained so as to cause a continuous pressure drop through the valve of over 1/2 lb. the valve will be maintained in an open position and allow up to the full flow for the orifice size used.

"As the solenoid valve in the pilot circuit is again closed the pressure below the piston will again equalize with the inlet fluid pressure and the spring will move the valve to the closed position."

FLEXIBILITY PROVIDED

If a liquid such as water is used, said Mr. Clark, the time required for the pressure below the piston to equalize with the inlet liquid pressure might be a matter of a few minutes and consequently the valve would be very slow in closing.

Consequently the orifice screw No. 11 is provided which may be drilled for various sized openings depending upon how quickly it is desired to equalize pressures and make the valve close.

If it is desired to have a very quick closing valve the orifice screw No. 11 may be left out entirely or it may be drilled for a 1/16 inch hole which for water would cause the closing time to be about 15 seconds.

A valve of this type, used for controlling water flow, will eliminate any possibility of water hammer due to the fact that the closing time can be adjusted up to several seconds or longer and due to the fact also that the restrictor piece is so shaped that the rate of flow decreases gradually as the valve closes, the speaker claimed. This tapers off the water flow over a period of seconds so that no instantaneous high pressure is built up due to the inertia of the flowing water.

MAINTAINING LIQUID FLOW

In some cases, said the speaker, this valve might be used to maintain a certain fixed outlet pressure such as is maintained by the automatic expansion valve. In this case a valve hook up could be used in which the adjustment of the automatic expansion valve determines the opening and closing of the small automatic valve according to the pressure in the outlet of the capacity booster valve.

For instance if it was desired to use this capacity booster valve as an expansion valve at 50 tons capacity with "Freon," the liquid line could be connected to the inlet of the capacity booster valve while the outlet of the capacity booster valve would hook to the inlet of the evaporator.

HOW RESULT IS OBTAINED

If the evaporator pressure is reduced below the pressure for which the small automatic expansion valve is set, the automatic expansion valve opens and this opening of the pilot circuit causes the capacity booster valve to open.

As the pressure goes up to a point at which the automatic expansion valve will close, the closing of the pilot circuit tends to cause the capacity booster valve to close. The result is that the capacity booster valve in combination with the automatic expansion valve just modulates to maintain the desired evaporator pressure.

There may be some applications where the combination of the automatic expansion valve and solenoid valve would be desirable, Mr. Clark pointed out. For instance, the automatic expansion valve outlet could be connected into the inlet of the solenoid valve mounted as shown in

Typical Application

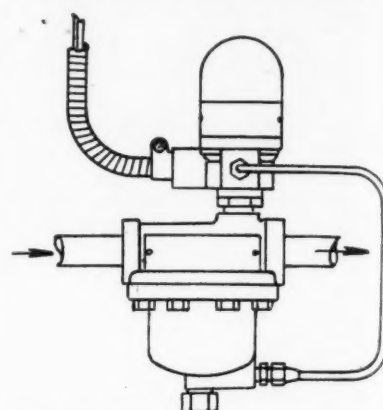


Fig. 2—Showing how the valve described in Fig. 1 is hooked up with a solenoid valve to regulate and modulate liquid flow.

Fig. 2 and the inlet of the automatic expansion valve could be connected to the pilot circuit outlet.

FOR CONDENSER PURPOSES

If a commercial refrigerating machine manufacturer determined the maximum amount of water required to properly take care of his condensing unit he could arrange one of these combinations and get the desired flow by maintaining the proper inlet water pressure to his water-cooled condenser.

The solenoid valve could be connected to the water leads so as to insure positive water shut off as the motor was shut off. It might be that the desired amount of water could be forced through the condenser by means of a 15 pounds pressure difference across the refrigeration condenser itself.

In this case the automatic expansion valve could be adjusted to maintain an outlet pressure of 15 pounds per square inch which it would hold even though the inlet water pressure might vary all the way from 20 to 100 pounds or more. Consequently the water pressure available in the locality the machine is to be used in would have nothing to do with the rate of flow. It would be maintained constant regardless of water pressures where the machine was installed.

REFRIGERANT DISTRIBUTION

In some cases it is not feasible to connect the outlet of the thermostatic expansion valve into the normal pilot valve return connection, Mr. Clark explained. In this case several distributor tubes are used to feed various circuits of a multiple circuit evaporator in order to get approximately equal liquid distribution to each circuit.

In this case if the thermostatic expansion valve outlet was connected into the normal pilot circuit return, the thermostatic expansion valve would then feel the pressure in the outlet of the capacity booster valve, but would not feel the pressure in the evaporator coil itself.

In high capacity expansion valves of the usual type an external equalizer tube is used so that the pressure responsive element of the thermostatic valve feels the pressure in the coil rather than in the valve body itself. In this case the outlet of the thermostatic expansion valve is connected into the inlet of one of the evaporator circuits.

This lets the thermostatic expansion valve feel the pressure in the evaporator rather than the pressure

(Concluded on Page 23, Column 1)

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The Most Accurate Control Valve for Small Capacity Systems

The "TK" Thermo Valve
Alco Valve Co., St. Louis, Mo.

Booster Valve May Provide the Effect Of Variable Orifice

(Concluded from Page 22, Column 5) in the capacity booster valve and consequently acts in exactly the same way as an external equalizer on the usual type of high capacity thermostatic expansion valve.

"One application of the capacity booster valve as a thermostatic expansion valve in combination with a solenoid valve works out very economically," declared the speaker.

"This hook-up, shown by Fig. 3, allows the combination solenoid and thermostatic expansion valve action to be obtained at high capacities at a comparatively low cost.

"For instance, the list price on thermostatic expansion valves in 50-ton capacities now amounts to approximately \$1.20 per ton. In order to get a solenoid valve to take care of 50 tons, a 1-inch orifice valve would be required in order to keep the pressure drop across the valve down to a minimum.

KEEP PRESSURE DROP DOWN

"It is important to keep this pressure drop down to a minimum to prevent large quantities of flash gas ahead of the thermostatic expansion valve which decreases the capacity of the thermostatic valve and makes its action erratic.

"Valves of this type as used in refrigeration have a list price of somewhere in the neighborhood of \$1.40 per ton of liquid line capacity. This means that under the old methods of operation there would be a cost of approximately \$2.60 per ton of refrigeration for solenoid valves and thermostatic expansion valves.

"With the capacity booster valve, the list price of the complete capacity booster, solenoid valve, thermostatic expansion valve combination may be obtained for less than \$1 per ton if used for a 50-ton job and this cost would further be reduced to something in the neighborhood of 70 cents per ton at rated capacities of the combination.

TO STOP SURGING

"Expansion valve manufacturers have recognized the necessity of having the proper valve capacities for the job so that the valve will not let the liquid through the coil altogether too fast and cause the surging condition to be extreme.

"With the capacity booster valve we have the effect of a variable orifice in that we can limit the maximum flow to the requirement of any particular job.

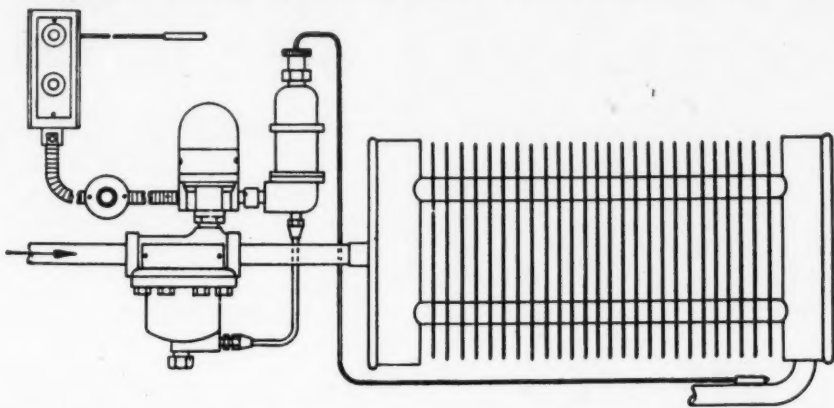
"For instance, suppose that we were to use this capacity booster valve as a thermostatic expansion valve on a job of 20 tons while the valve was actually able to handle up to 75 tons.

STOP SCREW IS KEY

"With the adjusting screw allowing the maximum valve opening, it would be quite possible to get a severe surging condition depending, of course, on coil design among other factors. Surging can be eliminated with the capacity booster valve, however, by properly adjusting the stop screw.

"Suppose that it is desirable to limit the back pressure on a particular job to 45 pounds and a 20-ton

Booster Valve In Large Capacity Work



This hookup, say advocates of the capacity booster valve, permits the combination solenoid and thermostatic expansion valve action to be obtained at high capacities with a minimum of equipment.

compressor is being used. In this case the stop screw could be adjusted to hold the valve in very nearly the closed position and the machine caused to operate constantly. With the evaporator warm and the thermostatic bulb of the thermostatic expansion valve warm the stop screw could be adjusted to allow the capacity booster valve to open a greater amount.

GRADUAL ADJUSTMENT

"This adjustment can be made gradually. This adjustment can be continued until the back pressure comes up to 45 pounds when the cap over the adjusting screw can be put back in place and the adjustment not touched further.

"This will thereby limit the maximum capacity of the capacity booster valve to the capacity of the condensing unit at 45 pounds back pressure and as the refrigerant works all the way through the coil and cools the thermostatic bulb, the valve will modulate below this maximum capacity, but will never open to a greater capacity and consequently will tend to eliminate surging in the evaporator.

OTHER USES

"Other uses of the capacity booster valve for refrigeration work include the use of the valve as a low side float valve. A small float valve can be a pilot for the capacity booster valve which takes care of the main flow of refrigerant into the evaporator.

"The mounting position of the capacity booster valve is not important as it may be mounted above or below the evaporator itself, but it will be controlled by the operation of a small float valve which is mounted at the liquid level which it is desired to maintain.

WATER VALVE AND SOLENOID

"A pressure operated water valve can be hooked up in series with a solenoid valve in the pilot circuit of the capacity booster valve to give a combination of modulated water flow as required according to the condensing pressure of the machine and at the same time provides a positive water shut off when the machine is stopped and the solenoid valve closed.

"A hook up of a capacity booster valve for suction line throttling valve work, includes a fitting having a 1/8 inch opening into the pilot return connection which is provided in a tee and the tee is fed from the pilot circuit outlet and from the normal inlet of an automatic expansion valve which has its normal outlet connected into the inlet of the capacity booster valve.

THROTTLING ACTION

"In this case the combination might be desired which would regulate the minimum back pressure at 30 pounds per square inch. The automatic expansion valve would be set to open when the pressure in the inlet to the booster valve dropped down below 30 pounds.

"Thus when the pressure in the suction line was above 30 pounds the automatic expansion valve would be closed and the 1/8 inch opening would allow refrigerant to be dumped from the chamber below the piston into the capacity booster valve outlet which would cause the valve to open.

"As the pressure dropped down below 30 pounds the automatic expansion valve would open allowing gas to be fed to the 1/8 inch opening as fast as the opening could take care of it.

"The automatic expansion valve should have an orifice of 5/32 inch diameter or larger."

Dallas 1939 Appliance Sales Up Over '37 & '38

DALLAS, Tex.—Appliance sales by dealers here during 1939 topped total sales in 1937 and 1938 by a wide margin. Total appliance sales in 1939 amounted to \$4,258,777, representing a gain of \$348,220 over total sales in 1938 and \$357,300 over 1937.

Electric refrigerators took the lead in sales volume with an estimated total of \$1,292,510 for 1939. This figure was a decrease, however, of 5.4% from the 1938 figure of \$1,366,740, compared to a decrease of 13% from 1937 to 1938. Sales for 1937 were estimated at \$1,567,520.

Electric cookers and roasters sold during 1939 reached a sales value of \$29,326, 27% above the 1938 total. Most other small appliances showed sales increases.

Vacuum cleaner sales for the year were valued at \$263,480 as compared with \$209,840 in 1938. Washer sales increased from \$186,060 in 1938 to \$222,460 in 1939.

Attic ventilating systems installed in 1939 represented total sales of \$224,500, a gain of \$96,300 over the 1938 figure.

Radio sales rose during 1939 to a record volume of \$1,065,920, topping 1938 sales by 21%.

	Unit Sales	Estimated Dollar Value
Refrigerators	7,603	\$1,292,510
Ranges	38	5,700
Water Heaters	7	700
Cookers and Roasters ..	419	29,326
Space Heaters	640	2,714
Vacuum Cleaners	6,587	263,480
Washers	3,178	222,460
Irons	252	17,640
Dishwashers	23	3,450
Radios	26,648	1,065,920
Attic Ventilating Systems	898	224,500

December, 1939, sales totals were:

	Unit Sales	Estimated Dollar Value
Refrigerators	181	\$ 30,770
Ranges	2	150
Cookers and Roasters ..	419	9,218
Space Heaters	320	640
Vacuum Cleaners	1,221	48,840
Washers	247	17,290
Irons	24	1,680
Radios	5,721	228,840
Attic Ventilating Systems	40	10,000

David Harrington Shifted To Sales Training Post

ST. LOUIS — David Harrington, formerly promotional and advertising manager for Frigidaire in the St. Louis and southern Illinois territory, has been appointed midwest representative for Frigidaire sales training schools, to be held all this year throughout Missouri and Illinois. Charles Molt has replaced him as advertising manager.

Unit System Is Solution To 'Cold Wood' Problem

SYRACUSE, N. Y.—Maintenance of a constant 70° F. temperature for wood working was a problem solved by unit heating here in the library furniture plant of Gaylord Bros., Inc.

Constant temperature was needed to guard against the wood becoming "cold" in storage, at night, or during the actual working. When this occurred, maintenance of working schedules was impossible due to the damage to the finish.

The new heating system, consisting of 22 Carrier unit heaters, will also provide air circulation and ventilation all year.

G-E Employees Received \$63,899 For New Ideas

SCHENECTADY, N. Y.—Employees of General Electric Co. received \$63,899 for new ideas adopted in 1939 under the company's suggestion system. Cash awards ranged all the way from \$2 to a top of \$525. During the year, 26,901 employee suggestions were submitted, 6,702 more than in 1938. Of this total, 10,121 were adopted.

More than \$1,000,000 has been paid out by the company in the last 20 years for new ideas and better ways to do the job.

New Sales and Service Firm Opens In Dallas

DALLAS, Tex.—Douglas Electric Appliance Co. has been opened here at 1323 W. Davis by S. E. Douglas.

FOR PROFITABLE BELT SERVICING...



"EYE-FUL" TOWER BELT MEASURER consists of (1) "Handimeter"; (2) 35 Gilmer Belts displayed on (3) 15-inch diameter tower topped by display sign with perpetual inventory form on back; (4) copy of complete Gilmer Catalog. ALL FOR ONLY \$19.36!

Gilmer's "HANDIMETER"

It instantly measures any belt brought in, up to 75" long and between 3/4" and 3" wide—the majority of all belts for small drives. Gilmer's "Handimeter" is only one of the 4 repeat-business builders you get with Gilmer's "Eye-ful" Tower Belt Merchandiser! Order today... we'll bill you \$19.36 through your nearest Gilmer jobber.

L. H. GILMER CO., Tacony, Philadelphia

A MODEL FOR EVERY NEED

Widest variety of standard stock sizes and styles in the industry.

The one-quality—all porcelain line.—

Protected by Famous Fogel Lifetime Vision.

Hundreds of successful dealers.

Some territories still available.

INQUIRE TODAY

FOGEL REFRIGERATOR COMPANY, 16th & Vine Sts., Phila., Pa. 19104

THE ACE of Tube Cutters

Of all the Imperial tools that are so widely used it is safe to say that the No. 174-F Tube Cutter is the "king of the crop" or the "Ace in the hole." You can buy cutters for less money, but you can't buy anything the equal of it for handling tubing work. The tube rests against two rollers, with vertical groove, making it possible to remove flare, when desired. Brass forged body, chromium plated finish. Knurled handle. Complete with reamer.

THE IMPERIAL BRASS MFG. CO., 565 S. Racine Ave., Chicago, Ill.

ORDER FROM YOUR JOBBER IMPERIAL VALVES • FITTINGS • TOOLS CHARGING LINES • FLOATS STRAINERS • DEHYDRATORS

WILSON WALK-IN COOLER LINE INCLUDES NEW MODELS

"ARCTIC" ADDED TO ALL-STEEL "KENT" AND "SUSSEX"

ZERO FREEZER ROOM WITH FREEZING OVEN NEW

FROZEN FOODS, FARM STORAGE, FURS, ICE CREAM INCREASE VAST FIELD SERVED BY WILSON

The dealers in Wilson "Complete Line" Coolers have many clients. Hotels, institutions, stores, and markets use normal cold storage. Farmers need a combination of normal storage with a freezer room for processing their own meat and vegetables. The ice-cream manufacturer uses the sub-zero temperatures of Wilson hardening rooms. For fur storage Wilson provides the

fireproof walk-in cooler with special vault-type double doors, and features standard on all Wilson Walk-Ins, including ball-bearing hinges, heavy-gauge double bottoms, and complete sanitation. Wilson dealers can supply any size of cooler for any application of freezing and of storing. Dealer-volume possibilities are enormous. Get the details at once.

REACH-IN COOLER LINES ALSO COMPLETE... PACKAGE UNITS READY

FOR DETAILED INFORMATION ADDRESS THE:

WILSON CABINET CORP. 120 MAIN ST., SMYRNA, DEL.



BUNDY TUBING
Copper-Braced Steel. Copper Coated Inside and Out. Sizes: 1/4" to 3/4" O.D.
BUNDY TUBING CO., DETROIT

Use CHICAGO SEALS
for seal replacements
A complete line in all sizes
CHICAGO SEAL CO.
20 North Wacker Dr., Chicago

Specify PENN
AUTOMATIC CONTROLS AND SWITCHES
FOR RECOGNIZED RELIABILITY
Write for Catalog
PENN ELECTRIC SWITCH CO.
GOSHEN, INDIANA

Go to Your Jobber For Your Controls

Automatic Products Company

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Automatic Products Company

Today, as in years past, the Refrigeration Service Man, guarding well the investments of millions of Refrigeration Owners everywhere — is the best Advertisement for Automatic Products Company — and A-P Valves!

We appreciate the enthusiastic support and recognition of this influential group of men . . . We are glad to realize that the inherent superiority of A-P Valves, with their long list of precision features, has enabled the Service Man to render a better service to HIS customers, and build up a reputation for quality installations.

A-P Valves . . . Accurate . . . Supersensitive . . . Leakproof . . . Easy to install . . . Easy to Adjust . . . DEPENDABLE . . . are the Recognized Leaders in Dependable Refrigeration Control.

New A-P TRAP-IT

Traps all impurities such as scale, gummy deposits, solder particles and MOISTURE. Improves the action of any Expansion and Solenoid Valve — and the efficiency of the entire System. Has many times the filtering and absorbing area of any ordinary strainer or filter. Contains nothing which can dissolve, be injurious to or enter into the System.

Model 205-C Thermostatic Expansion Valve

AUTOMATIC PRODUCTS COMPANY
2450 NORTH THIRTY-SECOND STREET
MILWAUKEE, WISCONSIN
Export Department — 100 Varick Street
New York City, N. Y., U. S. A.

Hardware Men Hear Attack on Failure To Restrict Outlets

(Concluded from Page 1, Column 2)

who permit their products to be offered at cut prices when used as premiums and recommended Federal Trade Commission investigation against firms whose policy in this respect violated the Robinson-Patman act.

Support of hardware dealers in behalf of the anti-diversion law enacted by the 1939 legislature, which has already greatly benefited appliance dealers, was asked by F. W. Greusel, Milwaukee, president, Greusel Distributing Corp., and president of the Wisconsin Radio, Refrigeration & Appliance Association.

Mr. Greusel stated that the law, which prohibits employers from selling to their employees merchandise other than that which they manufacture or deal in, has resulted in restoring to retailers thousands of dollars worth of business which had been diverted prior to passage of the act.

ANTI-DIVERSION LAW

Because of the confusion existing in the electrical appliance industry, based partly on structure of the industry which includes manufacturers as well as jobbers and retailers who make and sell a variety of types of merchandise, it has been difficult to solve its major trade problems by cooperative effort within, Mr. Greusel explained, and for that reason it has been necessary to resort to legislation.

The need for an anti-diversion law as enacted was explained by Mr. Greusel when he said that one department store after the 1938 holiday season found itself with more roasters of a national make than it had purchased from its wholesaler. The reason was because of this store's liberal return policy it had accepted and extended credit on roasters which persons had purchased at reduced prices from other than retail outlets.

A new type of dealer who will handle all types of home equipment, as distinguished from home furnishing, was predicted for the future by Mr. Greusel.

UP TO MANUFACTURER?

"I believe the solution to our problem in the electrical appliance industry lies almost exclusively with the manufacturer," Mr. Greusel said. "He is in a position to control and eliminate the distribution of his products going to diversion."

"It is true that some manufacturers have registered under the fair trade laws, but they don't want to act under them. Unless a manufacturer is sincere in operating under fair trade, he hasn't done a great deal for the industry nor has gone as far as he could," Mr. Greusel paid tribute to the sales policy of the Chicago Flexible Shaft Co. as one which could well be emulated by others in the industry.

Reading from the Dec. 25 issue of Drug Topics, Mr. Greusel stamped as an "indictment against our industry," the story captioned, "Catalogs Help Him Move Appliances," which told how a Palmyra, Pa. druggist sold appliances from catalogs and without benefit of any stock.

A CHARGE ACCOUNT SUCCESS

W. H. Wittwer, credit manager, Wolff, Kubly & Hirsig Co., Madison, Wis., discussing profitable credit selling, said that over 60% of the business at their hardware store was done on a charge basis and over 90% of all appliance sales on a contract basis regardless of the purchaser.

Interviewing the person desiring to open a charge account is an important step, Mr. Wittwer explained. "A well opened account is often half collected," he said. "When interviewing the customer, try to put her at ease. Present your questions in a conversational manner as though you were trying to help the individual rather than merely playing her with questions in an impersonal manner."

Mr. Wittwer, in outlining the procedure followed in his store in questioning applicants, urged his listeners to be wary of the applicant who says he has never had any charge accounts. "Most likely he has had

them, but doesn't like to talk about them because they are bad records," he said.

"We feel it advantageous and profitable to handle our own paper," Mr. Wittwer said. "We have an arrangement with our bank for the financing of this paper at a low interest rate and charge our customers 6% interest plus a \$1 service charge. We have added this latter charge because we have found that 6% is not enough to cover the cost of our loan to enable us to make a profit, and I daresay that in the past five years we have had not over three complaints against this charge, and our carrying charge still compares favorably with that of mail order competition."

"If we had to pay interest at the rate of 6% from our bank for carrying our paper, we still feel that there are sufficient advantages in carrying our own paper to offset this."

Mr. Wittwer explained that monthly or weekly payments mean a continued flow of traffic for the store with between 40 to 125 people coming in daily for that purpose alone.

The collection procedure based on follow-up cards was explained by Mr. Wittwer as used by Wolff, Kubly & Hirsig Co. "We believe in carrying along deserving individuals; it pays big dividends," Mr. Wittwer said. "We don't repossess as long as the present value of the merchandise is still higher than the amount the customer has to pay and as long as he is still making some kind of payment. In this respect, the better quality merchandise is a better risk, while that of lower quality requires a closer check on the customer."

Profitable credit selling has benefited Wolff, Kubly & Hirsig Co. in a number of ways, Mr. Wittwer explained, by cutting down bad debt losses, by enabling the store to borrow less money thereby cutting down its interest cost and permitting it to discount its bills, by increasing its capital turnover and rate of profit. In addition, the store doesn't lose business by having its slow pay customers trade at its competitors.

Philco Advertisement In March 2 Colliers Said To Be Unique

PHILADELPHIA — A four-page full color "pull-out" advertisement, said to be the first of its kind in the advertising history of the United States, will be used by Philco in the March 2 issue of Collier's magazine to announce nationally its 1940 electric refrigerator line.

The advertisement will launch an ambitious advertising and promotional campaign on the Philco refrigerator, says Sayre M. Ramsdell, vice president of the company. In addition to the Collier's insertion, color pages are scheduled for Saturday Evening Post, and pages in Good Housekeeping and Liberty.

Companion promotion to these national broadsides are full page advertisements now appearing in 195 key newspapers throughout the country, Mr. Ramsdell says.

Introductory page of the four-page pull-out, which follows a right-hand page of regular editorial matter, is devoted to a shower of adjectives describing the new Philco refrigerator. Turning this page to the left reveals a three-page spread, with the food-filled feature model LH-6 in the center, flanked by photos illustrating the "three zones of cold" and the Conservador feature.

To call attention to the precedent breaking advertisement, Collier's is taking full-page advertisements in newspapers in New York City, Chicago, Philadelphia, and Detroit. As part of the cooperative promotion, more than 12,000 copies of the magazine containing the advertisement will be delivered by Western Union messengers to Philco distributors and dealers throughout the country.

Campion Is Frigidaire Division Manager

JANESVILLE, Wis.—Joseph M. Campion, local Frigidaire dealer for the past 10 years under the name of the Campion Appliance Co., has been named division manager for the Frigidaire division of General Motors Sales Corp. with headquarters in Chicago. The local Frigidaire agency has been taken over by the Wisconsin Power & Light Co.